HYPOLIPIDEMIC ACTIVITY ON

ATHIMETHAM (Hyper Cholesterol)

NAANAL KARUMBU CHOORANAM

(Saccharum Spontaneum)

&

HYPOGLYCAEMIC ACTIVITY IN THE MANAGEMENT OF MADHUMEGAM (Diabetes Mellitus)

KANDHAGA PARPAM (Sulphur)

(DISSERTATION SUBJECT)

For the partial fulfillment of requirements to the Degree of

DOCTOR OF MEDICINE (SIDDHA)

(GUNAPADAM BRANCH)

GOVERNMENT SIDDHA MEDICAL COLLEGE

Tirunelveli – 627002

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CONTINUOUS MEDICAL EDUCATION PROGRAMME

Conducted by

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GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI

Certificate

This is to certify that Dr. R. MOOVENDAN.
PG Gunapadam Department, Government Siddha Medical College, Palayamkottai has actively participated in the CME Programme held on 09.01.2013 at conference hall Govt. Siddha Medical College, Palayamkottai, Tirunelveli District.

This programme focussed on "INTERLINK BETWEEN THE PLANTS AND THE PLANETS, HERBAL REMEDY FOR TUBERCULOSIS & GENERAL GUIDELINES FOR RESEARCH AND EVALUATION OF TRADITIONAL MEDICINE".

Dr.G.ESSAKKY PANDIAN	Dr.A. KINGSLY	Dr. N. CHANDRA MOHAN DOSS
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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

69, Anna Salai, Guindy, Chennai - 32.

DEPARTMENT OF SIDDHA

CERTIFICATE OF PARTICIPATION

This is to certify that Dr. .....R. MOOVENDAN.....

has participated as ~~Resource Person~~ / Delegate in the Workshop on

"Research Methodology & Biostatistics" for AYUSH Post Graduates &

Researchers organized by the Dept. of Siddha from 04.07.2011 to 08.07.2011

Dr. N. Kabilan
Prof. & Head

Dr. Sudha Seshayyan
Registrar i/c

Dr. Mayil Vahanan Natarajan
Vice-Chancellor

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INTRODUCTION

"அற்றா லளறிந் துண்க வஃதுடம்பு

பெற்றானெடிதுய்க்கு மாறு"

- திருக்குறள்

உடலைப் பெற்ற ஆன்மா (உயிர்) இன்ப துன்பங்களைப் பெற்று அறம்,பொருள்,இன்பம் வீடும் பயக்கத் துணையாகவுள்ள உடல், நெடு நாள் உய்யுமாறு அவ்வுடற்குத் தகுந்தாற் போல் அளவறிந்து உண்க: உயிரை வளர்க்க என வற்புறுத்தியுள்ளார்.

"மருந்தென வேண்டாவாம் யாக்கைக்கு அருந்தியது

அற்றது போற்றி யுணின்"

- திருக்குறள்

மக்கள் நாம் உண்டது நன்றாகச் சமைக்கப் பெற்று அகட்டை விட்டுக்

கீழிறங்கியபின் வயிற்றுள் அவ்வளவு இல்லாக்கறி அறிந்து பின்னர் உண்ணின்,உடலுக்கு மருந்தென்பது வேண்டாவாம். என்று திருவள்ளுவர் பல நூற்றாண்டு முன்னரே கூறியுள்ளார்.

In the present scenario lipid and lipoproteins abnormalities are extremely common in general population. In Siddha medicine, Hyperlipidemia can be correlated with Athimetham.

In siddha medicine Athimetham(hypercholesterol) is one of the most common problems in worldwide, due to lack of balanced diet, physical exercises, timely diet, stress factors, mechanical life, fast foods etc. leads to chronic hypercholestermedia, which produces coronary artery disease, Dm-II, infertility, etc. to overcome this complications, the siddha literature has given an

evidence that the drug Naanal Karumbu is more effective, contains more hypo lipidaemic effects, easy availability, cheaper one and less toxic producing drug.

So far pharmacological properties of Naanal Karumbu have not been chosen for hypolipidaemic activity. Hence the author had selected this drug Naanal Karumbu (Saccharum spontaneum) for hypolipidaemic activity on Athimetham (Hyper cholesterol)

In India, the overall prevalence of hypercholesterolemia was 53.3% in men and 48.2% in women. The overall prevalence of hyperlipidaemia was 29.3% in men and 13.7% in women. The overall prevalence of low HDL level was 47.4% in men and 53% in women.

The prevalence of dyslipidemia was observed to be higher in males than in females which is 38.7% males and 23.3% were females.

Lipid lowering agents now available in market may have adverse effects like headache, myalgia, alopecia and angioedema.

AIM AND OBJECTIVES

Aim and objectives

Aim:

To evaluate the action and efficacy of Naanal Karumbu chooranam(Saccharum spontaneum) in the management of Athimetham.

The drug Naanal Karumbu chooranam(Saccharum spontaneum) is dedicated for athimetham in gunapadam mooligai vaguppu, pageno:565 published on 1998 by department of Indian medicine and homeopathy.

Objectives:

The clinical efficacy of Naanal Karumbu chooranam was evaluated by collection of siddha literatures and in botanical aspect as well.

Then by confirming physical properties, chemical study, pharmacological study and clinical trial reveals the effect of this drug Naanal Karumbu.

For clinical trial 40 patients of both sexes in the age group 20-80 and body weight 50-80 kgs were selected for clinical trial based on the inclusion and exclusion criteria and treated with Naanal Karumbu chooranam one gram bd with luke warm water for 40 days as outpatient and in-patient in Government Siddha Medical College Hospital, Palayamkottai and there was reduction of serum TGLs, serum TC, serum HDL, serum LDL, serum VLDL values.

BOTANICAL CLASSIFICATION

Taxonomy

Botanical Name	:	Saccharum spontaneum, Linn.
Kingdom	:	Plantae
Phylum	:	Tracheophyta
Class	:	Liliopsida
Order	:	Poales
Family	:	Poaceae

Physical Characterstics :

A perennial grass with slender culms. Forms continuous cane brakes with most often aggressive rhizomatous tillering distributed widely in tropical, sub-tropical parts of Asia, Africa and ascending upto an attitude of 1800m culms, green, or ivony (or) white hard but very pithy and often hollow in the centre varying in diameters 5 to 15mm. Often rooting at the nodes , internodes usually long and always thicker than internodes.

The inflorescence a panicle varying in length and in colour from pale or greyish white (or) purplish grey. Spikelet's in pairs, one pedicelled other sessile.

Saccharum spontaneum has a widest geographical range among the members of genus saccharum.

Mainly distributed in slope of Himalayas in northern India to equatorial regions. A valuable collection of forms has been assembled at Coimbatore.

Kans is a coarse grass normally not relished by cattle and is generally used as a fodder only in times of scarcity.

Saccharum spontaneum growing in J&K is reported to contain hydrocyanic acid in green condition and produce a deletorious effect and sometimes death in live stock.

Uses:

1. Pulp suitable for wrapping writing, printing and grease proof papers can be produced from the grass.
2. Used for thatching of roofs and its leaves are used for making ropes.

Folkloric:

- In Philippines decoction of the roots used as a diuretic.

- Decoction of roots used for fever.
- Warmed poultice of the stem pulp applied to painful areas in the leg and in cases suffering from bed sores.

In Pakistan, used as laxative, phthisis, burning sensations and disease of the blood.

In Bengal, roots used as galactogague and diuretic. In siddha whole plant is used for disease of vatam and pittam, vomiting and various abdominal, disorders, mental disease, dyspnoea, anaemia and obesity.

In India, fresh juice is used to treat mental illness and mental disturbances by the vaidhiyars.

In uttarpradesh, paste prepared from equal quantities of fresh juice of cynodon dactylon and saccharum spontaneum is given with cow's milk and sugar for leucorrhea early morning for 1 month.

Action :

Laxative

Aphrodisiac

Burning sensation

Vesicle calculi

Disease of Blood

Biliousness

Roots :

are sweet, astringent, emollient, refrigerant, diuretic, lithotriptic, haemostatic, laxative, tonic and aphrodisiac. (useful in vitiated conditions of pitta & vadha, burning sensation, strangury, renal and vesical calculi, dyspepsia, hemorrhoids, menorrhagia, dysentry, phthisis and general debility.

The Wealth of India, Vol 9.

Part used : Whole plants and roots

Root	:	Sweet, astringent, emollient, refrigerant
Diuretic	:	litho tropic, laxative, aphrodisiac, tonic
Uses	:	Burning sensation.
		Renal and vesicle calculi
		Dyspepsia
		Hemorrhoids
		Dysentry
		General debility

GUNAPADAM ASPECT

Botanical nomenclature:

Saccharum Spontaneum, Linn.

Tamil Name:

நாணல்

Vernacular Names

Eng	:	Thatch grass, wild sugarcane
Tel	:	Kikkisa
Mal	:	Nanal Pullu
Kan	:	Baroo
Sans	:	Kakekshu
Hind	:	Kasa

Tam	:	Pekkarimbu
Hind	:	Kas, Kus
Mal	:	Kusa, Nannana
San	:	Kasah
Tel	:	Kakiceruku, Kakigaddi

Tam	:	Pekkarimpu
Hind	:	Kas, Kus
Tel	:	Kaki ceruku, Kaki gaddi
Kan	:	Gorasu lullu
Sans	:	Ikshugandha, Kasha
Mal	:	Niangama

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1. குணபாடம் மூலிகை பக்கம் - 565
2. Indian Medicinal plants volume – 5
3. Medicinal Plants P.g 396, 397.

வளரியல்பு : Habitat : A Perennial grass with slender culmes.

(இது புல்லினத்தை சேர்ந்தது).

வகை : (இரண்டு வகை)

1. Sirunaanal **(சிறு நாணல்)**
2. Perunaanal **(பெருநாணல்)**

I have selected perunaanal for this dissertation.

பயன்படும் உறுப்பு :

Part used : Stem, root

Taste: Sweet(இனிப்பு)

Potency:cold(தட்பம்)

Biotransformation: Sweet(இனிப்பு)

Actions:

Stem(கரும்பு)

- Refrigerant (குளிர்ச்சியுண்டாக்கி)
- Antipitha (பித்தமடக்கி)

Root (வேர்)

- Diuretic (சிறுநீர்பெருக்கி)
- Galactagogue (பாற்பெருக்கி)

பொதுகுணம்

வாயுபித்தம் வாந்தி நீர் மாறும் அதிதூல
நோயுளெழும் வயிற்றி னோய்கலங்கும் - ஓயாத
ஈளையொடு பாண்டு மெதிரா தடங்கிநிற்கும்
நாளுநா ணற்கரும்பினால்

இதன் சாற்றினால் வெறிநோய், வாந்தி, சுமையின்மை, வயிற்றிலெழு நோய், இரைப்பு, பாண்டு இவை நீங்கும். மிகுதியாய் பருத்த உடல்மெலியும்

நாணல் :

நாணல் சாற்றாலும் குடிநீராலும் அடில்நோய் போம்

---

1. அகத்தியர் குணவாகடம்
2.குணபாடம் - மூலிகை க.ச.முருகேச முதலியார் P.G. No. 565

"சொல்லுமிகு வாருகமு தோன்றும் சர நாணல்
ஒல்லுந் துவரினிப்போ டொன்றுகுணம் - கொல்லுகுறி
பாறியதோர் குன்மமெட்டும் பாறியிடும் அல்லமெல்
வீரியமும் விருத்தியாமே"

வேறு பெயர் :

- வாருகம்
- சரம்

குணம்

Sweet, Astringent (துவர்ப்பு, இனிப்பு)

தீரும் நோய்கள்

- எண் வகை குன்மத்தை நீக்கும்
- வீரிய விருத்தி உண்டாக்கும்

சங்க இலக்கிய பெயர்	:	தருப்பை
உலக வடிக்குப் பெயர்	:	தர்ப்பை, குசப்புல், **நாணல்**
தாவரப் பெயர்	:	Saccharum spontaneum

நாணல் என்பது ஒரு வகைப்புல் புதர்ச்செடியாத் தரையடி மட்டத்தண்டிலிருந்து செழித்து வளரும்.

"வேழம் நிரைத்து வெண்கோடு விரை இ
தாழை முடித்து தருப்பை வேய்ந்த
குறியிறைக் குரம்பைப் பறியுடை மூன்றில்"

\- பெரும்பானாற்றுப்படை 263-265

என்ற அடியில் கடியலூர் உருத்திரங்கண்ணணார்
தருப்பை புல்லைப் குறிப்பிட்டுள்ளார்.

வஞ்சி மரமும் காஞ்சி மரமுமாகிய வெள்ளிய கொம்புகளைக் கைகளுக்கு நடுவே கலந்து நாற்றி, வேழக்கோலை வரிச்சாக நிரைத்துத் தாழை நாரால் கட்டித் தருப்பை புல்லாலே வேயப்பட்ட குறிய இறப்பையுடைய குழலினையும் என்பதால் கூரை வேய்தற்கு

தருப்பைபுல் பயன்படுத்தப்பட்டது என்பதும் இவற்றை வேழக் கோலாலே வரிச்சை நிரைத்துத் தாழையின் நாரினால் கட்டுவர் என்பதும் அறியப்படும்.

தாவர இயல் வகை : பூக்கும் ஒரு வித்திலைத் தாவரம்

தாவர தொகுதி : Glumaceae

தாவர குடும்பம் : Graminaea

தாவர பேரினம் : Saccharum

தாவர சிற்றினம் : Spontaneum

தாவர இயல்பு : புதர்செடி - புதராக வளரும் புல் பல்லாண்டு வாழும் தரைமட்டத்தண்டிலிருந்து கிளைத்து செழித்து வளரும்.

தண்டு : "கலம்" எனப்படும்
15 அடி உயரம் வரை வளரும்

இலை : மிக நீளமானது 1-4 அடி நீளம்
0-2-5 அங்குல அகலம்

மஞ்சரி : 2 அடி நீளமான கலப்பு மஞ்சரி கிளைத்திருக்கும்

மலர் : கரும்பின் மலரை ஒத்தது - வெண்ணிறமானது

PART USED (பயன்படும் உறுப்பு) : BASAL STEM, ROOT (அடித்தண்டு, வேர்)

BASAL STEM (அடித்தண்டு) : REFRIGERANT,BILIOUSNESS (குளிர்ச்சியுண்டாக்கி பித்தமடக்கி)

ROOT (வோ்) :DIURETIC GALACTAGOGUE (சிறுநீர்பெருக்கி பாற்பெருக்கி)

அடித்தண்டு சாறு :

வெறிநோய்
வாந்தி
சுவையின்மை
பாண்டு
இரைப்பு தீரும்

மிகுதியாக பருத்த உடல் மெலியும்

நாணல் குடிநீர் : உடல் வெப்பம் தனியும்

1.சங்க இலக்கியத் தாவரங்கள் பக் எண். 745, 746

2.பைபிள் மூலிகைகள் பக்.எண். 823, பரிசுத்த வேதாகமம்

நாணல் சேரும் பிறமருந்துகள்

1. ஏலாதிக் கிருதம்

சரக்குகள் :

1. அத்திமரப்பட்டை
   ஆலமரப்பட்டை — 20 பலம்
   அரச மரப்பட்டை
   இத்தி மரப்பட்டை
2. அதிமதுரம்
   சந்தனம்
   தாமரை வளையம்
   வெள்ளறுரு வேர் — வகைக்கு 1 கழஞ்சு
   சிறுநாகப்பூ
   இலவங்கப்பத்திரி
   நாணல்
   அல்லிக் கிழங்கு
   அரசமரக்குச்சி
   ஏலம்
   கோஷ்டம்
   இலுப்பைபூ
   செங்கழுநீர்கிழங்கு
   பேரீச்சங்காய்
   சண்பகப்பூ
   கிச்சிலி கிழங்கு
   நன்னாரி வேர்
   அசுவகந்தி
   ஆலங்குச்சி
2. தாழைவிழுதுசாறு படி 2
   வெள்ளறுரு சாறு படி 2
   பசுவின் நெய் படி 2

செய்பாகம் :

முதலாவது அங்கத்தில் கூறப்பட்ட நான்கு பட்டைகள் 50 வருடத்திற்கு மேற்பட்ட மரபாகம் பார்த்து செவ்வேறிய பட்டையாகக் கவனித்து பஞ்சுபோல் நசுக்கிப் பெரிய மட்பாண்டத்தில் போட்டு 16 படி தண்ணீர்விட்டு அடுப்பிலேற்றி சிறுக எரித்து இரண்டு படி அளவிற்கு சுண்டக காய்ச்சி வடிகட்டி வைத்துக் கொள்க.

இரண்டாவது கூறப்பட்ட 19 சரக்குகளையும் இடித்து பசுவின் பால் விட்டு மெழுகு பதமாக அரைத்து எடுத்துக் கொள்ளவும் அப்பால் ஒரு கிரு பாண்டத்தில் முன் சுத்தப்படுத்திய கியாழத்தை விட்டு அதனில் அரைத்து வைத்துள்ள கற்கத்தை போட்டு கலக்கி மூன்றாவது அங்கத்தில் கூறப்பட்ட திரவங்கள் விட்டு அடுப்பேற்றி சிறு தீயாக தினம் 2 முதல் 3 மணிநேரம் எரித்து நான்காவது நாள் பதமுறக் காய்ச்சி வடித்துக் கொள்ளவும்.

அளவு : 1-2 தேக்கரண்டி (2) வேளை

நோய் : ஈளை, எலும்புருக்கி, பித்தவறட்சி, காசம், உளைமாந்தை.

பத்தியம் : புளி தள்ளி இச்சாபத்தியமாக இருத்தல்,

நெய்யை நீக்கி நல்லெண்ணெய் கூட்டிச் செய்யும் சம்பிரதாயமும் உண்டு. இந்த தைலத்தில் ஸ்நானம் செய்து வர அதிக நன்மைகள் தரும்.

- பாண்டு காமாலைக்கு ___ நிலப்பனைக் கிழங்கு எண்ணெய்
- சன்னிக்கு ___

  நாய்வேளை, குங்குலியம், கடுகு, திப்பிலி, நாணல், பெருங்காயம், கருஞ்சீரகம், கடுக்காய், ஏலம், எருக்கு இலை பூ
- விளக்கெண்ணெய், நெருப்பு சட்டியலிட்டு புகைக்க,
- குளிர்சுரம்
- சன்னி தீரும்

நாணல் சிறப்பு கற்பம்

தருப்பையின் வேரைக் குடிநீரிட்டுக் குடிக்கப் பித்தகாங்கை நீங்கும்

1.சித்த மருத்துவம் சிறப்பு பக்கம் எண் 12

2.கண்ணுசாமி பரம்பரை வைத்தியம் பக்.எண். 237

3.கண்ணுசாமி பரம்பரை வைத்தியம் பக்.எண். 81

நாணல்

ஒரு பலம் நாணல் வேரை நையச்சிதைத்து இரண்டாடுக்கு சலத்திற்போட்டு நாலிலொரு பாகமாகச் சுண்டக் காய்ச்சின் கஷாயத்தை மேற்சொன்ன முறைப்படி குடித்து வந்தாற் பித்தகாங்கை முதலிய பிணிகள் நீங்கும்.

- கந்தகச் செந்தூரத்திற்கு கொடுக்கப்படும் துணைமருந்தில் நாணல் கரும்புச்சாறு சேர்கிறது இதனால் சுரதோட நோய் தீரும்.

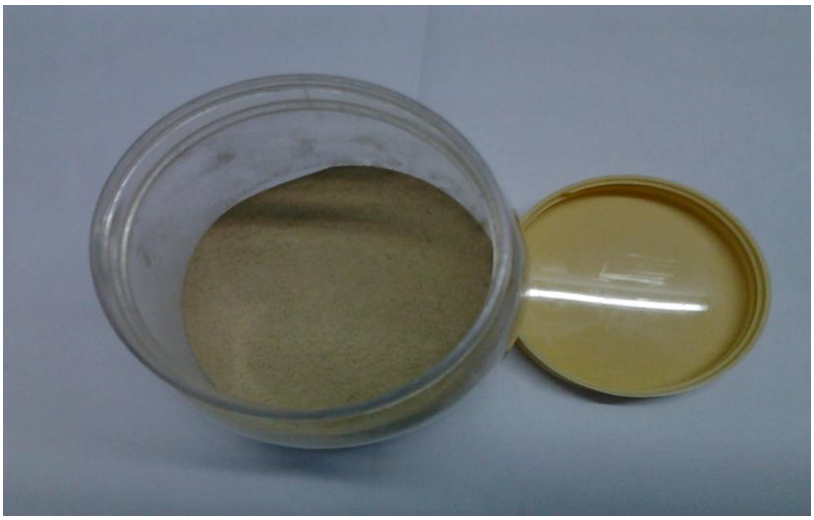
1.தேரையர் யகம வெண்பா பக்கம் எண் 38, 39

2.குணபாட தாதுவகுப்பு பக்க எண் 315, 316

SACCHARUM SPONTANEUM(NAANAL KARUMBU)

STEM OF NAANAL KARUMBU

NAANAL KARUMBU CHOORANAM



PHYTOCHEMICAL REVIEW

(Saccharum Spontaneum)

Composition	Green	Ripe Grass
Crude protein	5.30	3.35
Ether extraction	1.42	1.16
Crude fiber	40	40.2
N – Free extraction	49.1	48
Calcium	0.58	0.42
Phosphonus	0.67	0.15%

Chemical constituents

- Quinones
- Terpenses
- Alkaloids
- Flavonoids
- Saponins
- Tannins
- Carbohydrates

- Protein
- Coumarin
- Phenols
- Steroids and
- Glycosides.

The Wealth of India, Vol 9.

<u>கொழுப்பின் பெயர்:</u>

ஆமேதான் புலத்தியனே மூன்றாய் கேளு

அடவான சடலமதின் கொழுப்பின் பேர்கள்

நாமே தான்; சொல்லுகின்ரோம், சுந்தரமே கேளு

நாதரவி, வாதரவி, பூதரவி யென்றும்

வாமேதான், வாதரவி மென்றதற்குப் பேரு

வாடபதி, நிராடபதி, மால்பதி யென்றும்

தேமேதான். திருவான விருவான வென்றும்

செப்பினோம்,சடலதின் கொழுப்பதுவின் பேரே

நாதரவி, வாதரவி, பூதரவி,வாடபதி, நீராடபதி, மால்பதி

<u>கொழுப்பு:</u>

- ஒவ்வோர் உறுப்பும் தத்தம் செயலை இயற்றும் பொழுது கடினமின்றி இயங்க அவற்றிற்கு நெய்ப்ப்பசை ஊட்டி உதவி புரிவது.
- இது ஏழு உடற்கட்டுகளில் ஒன்றாகும்.
- உடம்பில் இருக்கும் ஒரு வித சிறு சிறு ஆலம் வித்துகளை போல இசிவான மஞ்சள் உருண்டை வடிவானது கொழுப்பு தாது எனப்படும்.

<u>கொழுப்பின் இருப்பிடம்:</u>

உடலின் மெய் அல்லது தோலின் கீழ் இத்தாது அடர்த்தியாகப் படர்ந்து காணப்படும். உடற்தாதுகளுக்கு உணவுகள் சரிவர ஊட்டப்படாத காலத்துக் கொழுப்பு சேமிப்பு உணவாக பயன்படுகிறது.

<u>கொழுப்பின் ப்ண்புகள்:</u>

உடற்சூட்டையும் ,வெளி சூட்டையும் தக்க நிலையில் வைக்கிறது. பொருத்துகள், கண்கள் போன்ற முக்கியம்மான உறுப்புகளை தாக்கும் அதிர்வு போன்றவகளிலிருந்து காக்கிறது.

<u>1.</u> பஞ்ச காவிய நிகண்டு பக்கம் எண் 70

அதிமேதம்

உடம்பில் சிற்சில பாகங்களில் மஞ்சள் நிறமான ஒருவிதக் கொழுப்பு உள்ளது. இவ்வகை கொழுப்பு மிகுதியானால் உடம்பு திரண்டு புஷ்டியாகிறது. வயது சென்றவரில் இது மெத்த குறைவு. இதனால் பல பல உபாதைகளுக்கு ஆளாகின்றனர்.

அந்த வகையில் நாடிகளில் பதிந்து இரத்தக் குழாய் அடைப்பு, இரத்த ஓட்டத் தடை, மயக்கம், சன்னி, போன்ற தொந்தரவுகளை ஏற்படுத்தும் கொழுப்பினை குறைப்பது அவசியம். மேலும் குறைந்த உழைப்பு, நிறைந்த உண்டி, உண்டவுடன் தூக்கம், அதிமேதததை உண்டாக்கும்.உடலில் கொழுப்பு அதிகப்படுவதால் மந்தபுத்தி, கர்வம், மமதை, மூடத்தனம், அகங்காரம் முதலியவை குற்ற வேறுபாட்டால் உண்டாகும்.

குறிகுணங்கள்:

- கன்னம், வயிறு, தொடை,ஆண் குறி இவ்விடங்களில் கண்டு கண்டாக கட்டுதல்.
- கண்டமாலை, கிரந்தி இவை உண்டாதல்
- களைப்பும் அற்ப உழைப்பிலும் பெருமூச்சு,பிட்டம், குறிகள்,மார்பு, வயிறு, தொடை, இவைகளில் தொங்கும் ஊறும் பெருகும்

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1. நோய் நாடல் நோய் முதல் நாடல் பக்கம்:257

HYPER CHOLESTEROL

Definition:

It is the condition of abnormally elevated levels of any or all lipids and/or lipoproteins in the blood.

Description of Hyperlipidemia

The fat-protein complexes in the blood are called lipoproteins. The best-known lipoproteins are LDL (low density lipoprotein) and HDL (high density lipoprotein).

Classification

- **Familial (primary)**
    - Type1(Rare)- Increased chylomicron(Diet control)
    - Type2a- Increased LDL
    - Type 2b – Increased LDL, VLDL
    - Type 3 (Rare) – Increased HDL
    - Type 4 –Increased VLDL
    - Type 5 (Rare)- Increased VLDL, chylomicron
- **Acquired (secondary)**

Causes:

-Diabetes

-Hypertension

-Family history

-Smoking

-Obesity

-Pregnency

-Hypo thyroidism

-Kidney failure

-Excess alcohol intake

-Medicines like gluco corticoids and estrogen

HYPERLIPIDEMIA

Hyperlipidemia is a condition characterized by very high levels of cholesterol in the blood. Cholesterol is a waxy, fat-like substance that is produced in the body and obtained from foods that come from animals (particularly egg yolks, meat, poultry, fish, and dairy products). The body needs this substance to build cell membranes, make certain hormones, and produce compounds that aid in fat digestion. Too much cholesterol, however, increases a person's risk of developing heart disease.

People with hypercholesterolemia have a high risk of developing a form of heart disease called coronary artery disease. This condition occurs when excess cholesterol in the bloodstream is deposited in the walls of blood vessels, particularly in the arteries that supply blood to the heart (coronary arteries). The abnormal buildup of cholesterol forms clumps (plaque) that narrow and harden artery walls. As the clumps get bigger, they can clog the arteries and restrict the flow of blood to the heart. The buildup of plaque in coronary arteries causes a form

of chest pain called angina and greatly increases a person's risk of having a heart attack.

Inherited forms of hypercholesterolemia can also cause health problems related to the buildup of excess cholesterol in other tissues. If cholesterol accumulates in tendons, it causes characteristic growths called tendon xanthomas. These growths most often affect the Achilles tendons and tendons in the hands and fingers. Yellowish cholesterol deposits under the skin of the eyelids are known as xanthelasmata. Cholesterol can also accumulate at the edges of the clear, front surface of the eye (the cornea), leading to a gray-colored ring called an arcus cornealis.

Physical Signs

High cholesterol levels normally do not cause any symptoms. Cholesterol may be deposited in various places in the body that are visible from the outside, such as in yellowish patches around the eyelids (xanthelasma palpebrarum), the outer margin of the iris (arcus senilis corneae) and in the form of lumps in the tendons of the hands, elbows, knees and feet, particularly the Achilles tendon (tendon xanthoma).[1][2]

High Cholesterol Overview

Cholesterol is a waxy, fatlike substance that the body needs to function normally. Cholesterol is naturally present in cell walls or membranes everywhere in the body, including the brain, nerves, muscles, skin, liver, intestines, and heart.

The body uses cholesterol to produce many hormones, vitamin D, and the bile acids that help to digest fat. It takes only a small amount of cholesterol in the

blood to meet these needs. If a person has too much cholesterol in the bloodstream, the excess may be deposited in arteries, including the coronary arteries of the heart, the carotid arteries to the brain, and the arteries that supply blood to the legs. Cholesterol deposits are a component of the plaques that cause narrowing and blockage of the arteries, producing signs and symptoms originating from the particular part of the body that has decreased blood supply.

Blockage to the leg arteries causes claudication (pain with walking) due toperipheral artery disease. Carotid artery blockage may cause stroke, and blockage of the coronary arteries leads to angina (chest pain) and heart attack.

Coronary heart disease (CHD) is caused by cholesterol and fat being deposited in the walls of the arteries that supply nutrients and oxygen to the heart. Like any muscle, the heart needs a constant supply of oxygen and nutrients, which are carried to it by the blood in the coronary arteries. Narrowing of the arteries decreases that supply and can cause angina (chest pain) when the heart muscle does not receive enough oxygen. Cholesterol plaques can rupture, resulting in ablood clot formation that completely blocks the artery, stopping all blood flow and causing a heart attack, in which heart muscle cells die from lack of oxygen and nutrients.

Text Book of Medicine, P. C. DASS

Text Book of Medicine, KRISHNA DASS

(NAANAL) : Saccharum Spontaneum :

- Psychopharmacological studies on the stem of saccharum spontaneum.
- CNS depressant/Antipsychotic activity
- Anti-microbial / cytotoxic / Anti-oxidant
- Anti microbial / Tripanchmool / Herbal combination.
- Genetic relationship between attributes in sugarcane clones related to saccharum Spontaneum
- Saccharum Spontaneum as a biomaterial for cell immobilization and modulated ethanol production by thermotolerant

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MATERIALS AND METHODS

PREPARATION OF NAANAL KARUMBU CHOORANAM

In this dissertation Naanal Karumbu Chooranam was taken as a single drug study to test its efficacy in treating athimetham.

The reference is taken from the book Gunapadam Mooligai Vaguppu page No.565

Collection of the drug:

The drug Naanal Karumbu was collected from the river belt of thamirabharani in Tirunelveli district.

Preparation of the drug:

- The stem of Naanal Karumbu is cut into small pieces and made into dry under shade.
- Then made into powder by pulverizer.
- Then by using a method in siddha called Vasthiragayam. The powder is ultra filterated.
- And kept in a clean, dry air tight container

Taste **:**Sweet

Color **:**Straw Yellow

Smell **:**No Smell

Dose **:**1g bd, before food

Adjuvant **:** Luke warm Water

Duration **:**40 days

Indication **:Hypercholesterol(Athimetham)**

Gunapadam Mooligai Vaguppu page No.565

PHYSICAL PROPERTIES

The standardization parameters of Naanal karumbu chooranam (Saccharum spontaneum) was done at Sastra University Thanjavur-401

The tests done are as follows.

pH at 1% of aqueous solution:

Five grams of Naanal karumbu chooranam (Saccharumspontaneum) is weighed accurately and placed in clear 100 ml beaker. Then 50 ml of distilled water is added to it and dissolved well. Wait for 30 minutes and then apply in to pH meter at standard buffer solution of 4.0, 7.0 and 9.2

Loss on drying@ 105^0 C:

Five gram of Naanal karumbu chooranam (Saccharumspontaneum) is heated in a hot oven at 1000 C to constant weight. The percentage of loss of weight was calculated as 4.94%.

Determination of ash value:

Weighed accurately 2 grams of Naanal karumbu chooranam (Saccharum spontaneum) in tarred platinum or silica dish and incinerate at a temperature not exceeding 450^0C until free from carbon, cooled, and weighed. Calculate the percentage of ash as 6.68% with reference to the air dried drug.

Water soluble ash:

To the gooch crucible containing to the total ash, added 25 ml of water and boiled for 5 minutes. Collected the insoluble matter in a sintered glass crucible or on ash less filter paper. Wash with hot water and ignite in a crucible for 15 minutes at a temperature not exceeding 450 ^{0} C substract the weight of the insoluble matter

from the weight of the ash the difference of the weight represents the water soluble ash. Calculate the percentage of water soluble ash as 305 with reference to the air dried drug.

Acid in soluble ash;

Boiled the ash 5 minutes with 25 ml of dil HCl. Collect the insoluble matter in gooch crucible on an ash less filter paper wash with hot water and ignite. Cooled in a dessicator and weighed. Calculated the percentage of acid insoluble ash as 1.29% with reference to the air dried drug.

SHANMUGHA ARTS, SCIENCE, TECHNOLOGY & RESEARCH ACADEMY (SASTRA)

(A University established under Section 3 of the UGC Act, 1956)

SASTRA University Tirumalaisamudram, Thanjavur-613401.

Centre for Advanced Research in Indian System of Medicine (CARISM)

GOVT. APPROVED DRUG TESTING LABORATORY APPROVAL No. R.DIS.NO.:282/2010

CERTIFICATE OF ANALYSIS

Name of the Product: 091-Naanal Karumbu Chooranam
Report No : CAR/DTL/CUR060
Date of Sampling : 09.10.12
Report Date: 18.12.12
Manufacturer : Dr.G.Kanmani, G.S.M.C, Palayamkottai

PHYSICO-CHEMICAL STANDARDISATION

S.No	TESTS	AS PER ANALYSIS
1.	Description	Straw yellow coloured powder
2.	pH(1% w/v solution)	5.53
3.	Bulk density	0.17gm/ml
4.	Tap density	0.25gm/ml
5.	Loss on Drying at 105°C	4.94%
6.	Total Ash	6.68%
7.	Acid Insoluble Ash	1.29%
8.	Water Soluble Extractive	23.83%
9.	Alcohol Soluble Extractive	17.27%

SIEVE ANALYSIS

S.No	Sieve No (μ)	% of particles retained
1.	600	2.77
2.	300	2.46
3.	150	36.92
4.	75	40.92
5.	Final Product	16.61

ANALYST

LAB IN-CHARGE

ASSOCIATE DEAN & CO-ORDINATOR

BIO-CHEMICAL ANALYSIS OF NAANAL KARUMBU CHOORANAM

PREPARATION OF THE EXTRACT

5gms of the drug was weighed accurately and placed in a 250ml clean beaker. Then 50ml of distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It is cooled and filltered in a 100ml volumetric flask and then it is make up to 100ml with distilled water. This fluid is taken for analysis.

QUALITATIVE ANALYSIS

Sl. No.	Experiment	Observation	Inference
1.	**TEST FOR CLACIUM** 2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4% Ammonium oxalate solution	A white precipitate is formed	Indicates the presence of calcium
2.	**TEST FOR SULPHATE :** 2ml of the extract is added to 5% barium chioride solution.	A white precipitate is formed	Indicates the presence of sulphate
3.	**TEST FOR CHLORIDE** The extract is treated with silver nitrate solution	A white precipitate is formed	Indicates the presence of chloride
4.	**TEST FOR CARBONATE** The substance is treated with concentrated Hcl.	No brisk effervescence is formed	Absence of carbonate
5.	**TEST FOR STRACH** The extract is added with weak iodine solution.	Blue colour is formed	Indicates the presence of Starch

6.	**TEST FOR IRON FERRIC** The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric Iron
7.	T**EST OF IRON FERROUS** The extract is treated with concentrated Nitric acid and ammonium thio cynate solution.	Blood red colour is formed	Indicates the presence of ferrous Iron
8.	**TEST FOR PHOSPHATE** The extract is treated with ammonium Molybdate and concentrated nitric acid	No yellow precipitate is formed	Absence of phosphate
9.	**TEST FOR ALBUMIN** The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Absence of Albumin
10.	**TEST FOR TANNIC ACID** The extract is treated with ferric chloride.	No blue black precipitate is formed	Absence of Tannic acid
11.	**TEST FOR UNSATURATION** Potassium permanganate solution is added to the extract.	It gets decolourised	Indicates the presence of unsaturated compound

12.	**TEST FOR THE REDUCING SUGAR** 5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change	Absence of Reducing sugar
13.	**TEST FOR AMINO ACID** One or two drops of the extract is placed on a filter paper and dried it well. After drying 1% Ninnydrin is sprayed over the same and dried it well.	Violet colour develops	Indicates the presence of Amino acid
14.	**TEST FOR ZINC :** The extract is treated with potassium Ferrocyanide.	No white precipitate is formed	Absence of zinc.

PHARMACOLOGICAL STUDY

Test Drugs

The Naanal karumbu chooranam was used in the study was processed by the methods prescribed in standard text books of siddha medicine in Gunapadam Mooligai vaguppu.

Preparation of drug for dosing

All drugs used for the study was suspended each time with 1% (w/v) solution of sodium carboxy methyl cellulose before administration.

Drugs and chemicals

Standard Drugs and fine chemicals used in these experiments were obtained from Sigma Chemicals Company, U.S.A. Other analytical grade chemicals were obtained from S.d. Fine Chemicals Ltd., Mumbai.

Experimental animals

Colony inbred animals strains of wistar rats of either sex weighing 200 - 250 g were used for the pharmacological and toxicological studies. The animals were kept under standard conditions 12:12 (day/night cycles) at 22^0C room temperature, in polypropylene cages. The animals were fed on standard pelleted diet (Hindustan Lever Pvt Ltd., Bangalore) and tap water ad libitum. The animals were housed for one week in polypropylene cages prior to the experiments to acclimatize to laboratory conditions.

High Fat Diet Induced Hyperlipidemia and screening of Naanal karumbu chooranam for Hypolipidemic activity

The chronic experimental hyperlipidemia was produced by feeding high fat diet. The high fat diet contains following ingredients per 100 gm of basal rodent chow:

Caseine : 20 gm

D, L- methionine : 0.3 gm

Corn starch : 15 gm

Cellulose powder : 5 gm

Sucrose : 49 gm

Vitamin mixture : 1 gm

Choline bitertate : 0.2 gm

Mineral mixture : 3.5 gm

Cholesterol : 1 gm

Corn oil : 5 gm

Cholesterol 1gm was suspended in corn oil and was mixed with 100gms of rodent chow along with other ingredients of the high fat diet. Pellets were made shade dried and used as high fat diet to induce hyperlipidemia every day till 30 days.

Animal Grouping

Thirty male SD rats weighing 180 to 250 gm were randomly divided into five groups of six each and kept in polypropylene cages for 5 days prior dosing for acclimatization to the laboratory conditions.

The male spargue dawley rats were randomized into 5 different groups (n=**6** per group)

GROUP 1:

Were control rats fed with normal lab diet & water.

GROUP 2:

Animals receiving high fat diet along with water.

GROUP 3:

Animals receiving high fat diet along with NKC 180mg/kg/po

GROUP 4:

Animals receiving high fat diet along with standard drug Atorvastatin (10mg/kg)p.o

On day 30, animals were anaesthetized with anesthetic either and blood was collected by retro orbital puncture. The blood was subjected to centrifugation to obtain serum. Serum was analyzed for serum TC.

Effect of Naanal Karumbu Chooranam on Serum Total Cholesterol

Groups		Sample 1	Sample 2
I.	Control	100 mg	100mg
II.	Diet	140mg	150mg
III.	Drug	90mg	95mg
IV.	Standard	80mg	85mg

Drug:Naanal karumbu chooranam

Diet:High fat diet

Standard:Atorvastatin

*The experimental protocol was approved by the Institutional Animal Ethical Committee (IAEC) at Government Siddha Medical College, Palayamkottai.

ANTI – MICROBIAL (BACTERIAL) ACTIVITY OF NAANAL KARUMBU CHOORANAM

Aim

To identify the anti-microbial (Bacterial) activity of Naanal karumbu chooranam against streptococcus,staphylococcus,pseudomonas,and Ecoli.

Medium: Muller Hinton agar

Components of Medium

Beef extract	:	300gms/lit
Agar	:	17gms/lit
Starch	:	1.50gms/lit
Casein Hydroxylate	:	17.50gms/lit
Distilled Water	:	1000 ml
pH	:	7.6

Procedure

The media was prepared from the above components and poured and dried on Petri dish. The organism was streaked on the medium and the test drug (1gm drug in 10ml of Water) was placed on the medium. This is incubated at 37^0C for one over night and observed for the susceptibility shown up clearance around the drug.

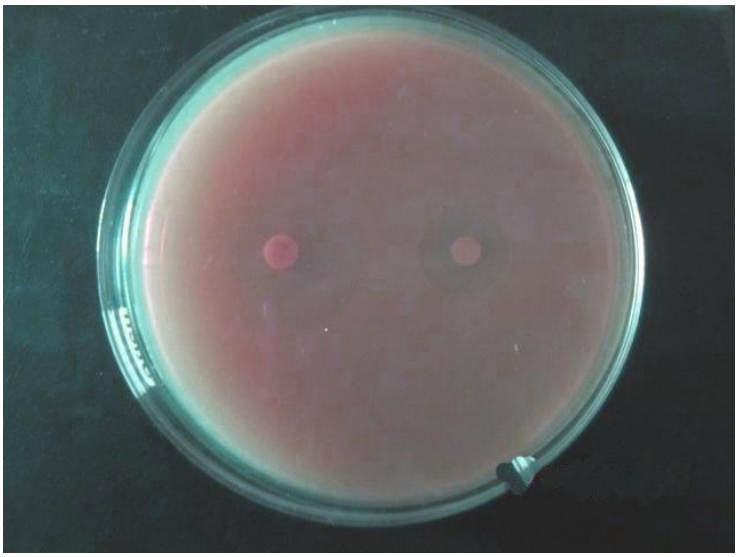
Table : Anti-microbial susceptibility test report

No.	Organism	Susceptibility	Zone of inhibition in mm
1.	Staphylococcus	Resistant	-
2.	Pseudomonal	Resistant	-
3.	E.coli	Moderately sensitive	10 mm
4.	Klebsiella	Resistant	-
5.	Proteus	Resistant	-
6.	Streptococcus	Resistant	-
7.		Resistant	-

Result

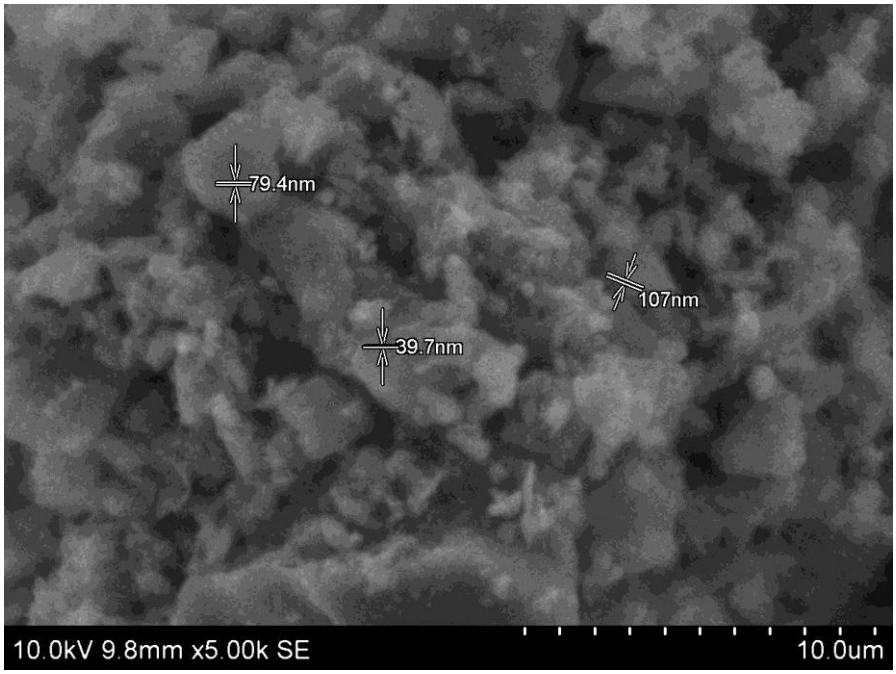
The test drug Naanal karumbu chooranam was sensitive against E.Coli

Ecoli



Scanning Electron Microscope

NAANAL KARUMBU CHOORANAM



55.66 nm size for Naanal karumbu chooranam

A **Scanning Electron Microscope** (**SEM**) is a type of electron microscope that produces images of a sample by scanning it with a focused beam ofelectrons. The electrons interact with electrons in the sample, producing various signals that can be detected and that contain information about the sample's

surface topography and composition. The electron beam is generally scanned in a raster scan pattern, and the beam's position is combined with the detected signal to produce an image. SEM can achieve resolution better than 1 nanometer. Specimens can be observed in high vacuum, low vacuum and in environmental SEM specimens can be observed in wet condition.

Principles and capacities

The types of signals produced by a SEM include secondary electrons (SE), back-scattered electrons (BSE), characteristic X-rays, light (cathodoluminescence) (CL), specimen current and transmitted electrons. Secondary electron detectors are standard equipment in all SEMs, but it is rare that a single machine would have detectors for all possible signals.

The signals result from interactions of the electron beam with atoms at or near the surface of the sample. In the most common or standard detection mode, secondary electron imaging or SEI, the SEM can produce very high-resolution images of a sample surface, revealing details less than 1 nm in size.

Due to the very narrow electron beam, SEM micrographs have a largedepth of field yielding a characteristic three-dimensional appearance useful for understanding the surface structure of a sample. This is exemplified by the micrograph of pollen shown above. A wide range of magnifications is possible, from about 10 times (about equivalent to that of a powerful hand-lens) to more than 500,000 times, about 250 times the magnification limit of the best light microscopes.

Back-scattered electrons (BSE) are beam electrons that are reflected from the sample by elastic scattering. BSE are often used in analytical SEM along with

the spectra made from the characteristic X-rays, because the intensity of the BSE signal is strongly related to the atomic number (Z) of the specimen. BSE images can provide information about the distribution of different elements in the sample. For the same reason, BSE imaging can image colloidal gold immuno-labels of 5 or 10 nm diameter, which would otherwise be difficult or impossible to detect in secondary electron images in biological specimens.

Characteristic X-rays are emitted when the electron beam removes an inner shell electron from the sample, causing a higher-energy electron to fill the shell and release energy. These characteristic X-rays are used to identify the

They are therefore usually coated with an ultrathin coating of electrically conducting material, deposited on the sample either by low-vacuum sputter coating or by high-vacuum evaporation.

Conductive materials in current use for specimen coating include gold, gold/palladium alloy, platinum, osmium,[12] iridium, tungsten, chromium, and graphite. Additionally, coating may increase signal/noise ratio for samples of low atomic number (Z). The improvement arises because secondary electron emission for high-Z materials is enhanced.

Fourier Transform Infrared Spectroscopy

Fourier transform infrared spectroscopy is a technique. It is used to find an infrared spectrum of absorption, emission, photoconductivity or Ramanscatterin g of a solid, liquidor gas. An FTIR spectrometer simultaneously collects spectral data in a wide spectral range. This confers a significant advantage over a dispersive spectrometer which measures intensity over a narrow range of wavelengths at a time. FTIR has made dispersive infrared spectrometers all but obsolete (except sometimes in the near infrared), opening up new applications of infrared spectroscopy.

The term Fourier transform infrared spectroscopy originates from the fact that a Fourier transform (a mathematical process) is required to convert the raw data into the actual spectrum. For other uses of this kind of technique, see Fourier transform spectroscopy.

Applications

FTIR can be used in all applications where a dispersive spectrometer was used in the past (see external links). In addition, the multiplex and throughput advantages have opened up new areas of application. These include:

GC-IR (Gas Chromatography-Infrared Spectrometry). A gas chromatograph can be used to separate the components of a mixture. The fractions containing single components are directed into an FTIR spectrometer, to provide the infrared spectrum of the sample. This technique is complementary to GC-MS (gas chromatography-mass spectrometry). The GC-IR method is particularly useful for identifying isomers, which by their nature have identical masses. The key to the successful use of GC-IR is that the interferogram can be captured in a very short

time, typically less than 1 second. FTIR has also been applied to the analysis of liquid chromatography fractions.

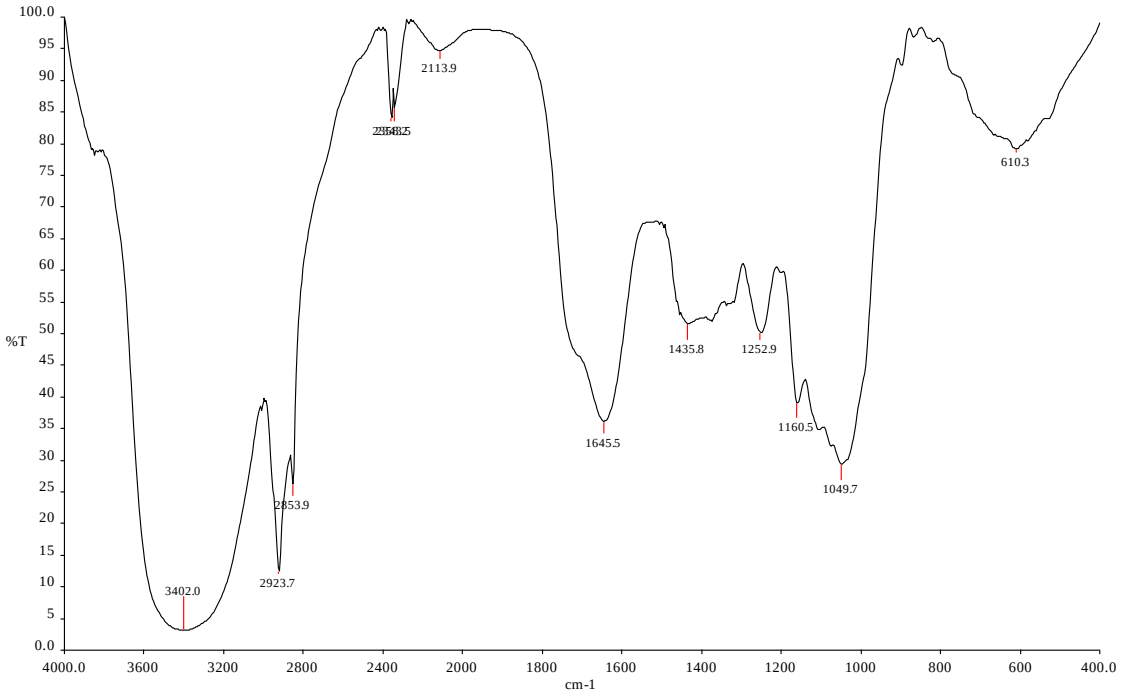
TG-IR (Thermogravimetry-Infrared Spectrometry) IR spectra of the gases evolved during thermal decomposition are obtained as a function of temperature.

Micro-samples. Tiny samples, such as in forensic analysis, can be examined with the aid of an infrared microscope in the sample chamber. An image of the surface can be obtained by scanning. Another example is the use of FTIR to characterize artistic materials in old-master paintings.

Emission spectra. Instead of recording the spectrum of light transmitted through the sample, FTIR spectrometer can be used to acquire spectrum of light emitted by the sample. Such emission could be induced by various processes, and the most common ones are luminescence and Raman scattering. Little modification is required to an absorption FTIR spectrometer to record emission spectra and therefore many commercial FTIR spectrometers combine both absorption and emission/Raman modes.

Photocurrent spectra. This mode uses a standard, absorption FTIR spectrometer. The studied sample is placed instead of the FTIR detector, and its photocurrent, induced by the spectrometer's broadband source, is used to record the interferrogram, which is then converted into the photoconductivity spectrum of the sample.

NAANAL KARUMBU CHOORANAM ON



FTIR

2.SP 3601 4000.0 400.0 3.1 100.0 4.0 %T 4 2.0

PT

REF 4000 100.0 2000 97.4 600

3402.0 3.1 2923.7 12.5 2853.9 26.1 2358.2 84.2 2343.5 85.6

2113.9 94.6 1645.5 36.1 1435.8 51.5 1252.9 50.1 1160.5 39.0

1049.7 29.3 610.3 79.1

END 12 PEAK(S) FOUND

CLINICAL ASSESSMENT

Aim

The Pharmacological studies of Naanal karumbu chooranam showed hypo-lipidaemic activity is estimated for clinical trial in the treatment of Athimetham(Hyper cholesterol).

Population and sample

The population consists of 40 patients of both sexes, age 20-80, with Athimetham satisfying the inclusion criteria was taken for the phase II clinical trial at OPD of the Government siddha medical college hospital, palayamkottai.

Sample size:

The trial size was 40 patients of both sexes.

Inclusion criteria:

1. Age -20- 80 years. (Both sexes)

2. Weight male-above 50 kgs, female -above 45 kgs.

3. As per the investigation report, increase in any one of the following various

types of lipids at various elevation levels was considered for clinical trial.

-Total serum cholesterol (200-300mgs/dl)

-HDL (Below 40mgs/dl)

-LDL (100-250mgs/dl)

-VLDL (40-60mgs/dl)

-Triglycerides (150-300mgs/dl)

4. Willing to be admitted in the hospital for 40 days or willing attends the OPD once in 7 days.

Exclusion criteria :(As per the patient's complaints**)**

1. Coronary heart disease

2. Pancreatitis

3. Any metabolic disorders

4. Occurrence of any serious illness

Withdrawal criteria:

1. Development of any adverse effect

2. Occurrence of any serious illness

3. The alternative treatment at GSMC,palayamkottai was provided.

Trial drug and duration

Drug- Naanal karumbu chooranam-1 gm bd with luke warm water, before food

Duration of trial treatment – 40days.

Tests, assessments and Investigation

1, Routine investigation -TC, DC, ESR, Hb, RBC, sugar (F/PP)

2. Lipid profile

3. Renal function test :(Urea-15-50, Creatinine-0.6-1.2)

4. Liver function test :(Total Bilirubin-0.2-1.2, SGOT-below 40, SGPT-below 35, Serum Alkaline Phosphate- 100-300)

5. Urine test-Albumin, sugar, & deposits

CONDUCT

- Athimetham patients satisfying inclusion and exclusion criteria were taken for clinical trial.
- The routine parameters were studied at "0'' level. The Naanal karumbu chooranam at the dose of one gram with water for hyper cholesterol for 40 days before food.
- At 41 st day again the same parameters eg: TC/DC/ESR/Hb/T.RBC/ Sug-F/PP/Lipid profile/RFT/LFT/Urine analysis were tested and tabulated.

Effect of Naanal karumbu chooranam on Serum Total Cholesterol Level

Groups	Normal Control I	HFD Control II	HFD+NKC III	HFD + Atorvastatin IV
Serum Total cholesterol mg/dl	80.47±1.34	202.02±3.11 a***	103.02±2.56 b***	82.39±1.37 b***

- Comparisons were between: a- Group I vs. II, b- Group II vs.III, IV, Values are expressed as mean ± SEM of 6 animals.
- Symbols represent statistical significance: *P < 0.05, **P < 0.01, ***P < 0.001.
- Statistical Significance test for comparison was done by Dunnet's't' test.

OBSERVATION AND RESULTS

Bio chemical analysis

The drug Naanal karumbu chooranam reveals the presence of calcium, sulphate, chloride, iron, aminoacids and starch.

PHARMACOLOGICAL STUDY

Serum total cholesterol:

The total cholesterol level significantly increased ($P<0.001$) in High fat diet (HFD) rats when compared to control rats. The Serum total cholesterol levels in NKC (90mg/kg/p.o treated HFD rats showed significant ($p<0.001$) decrease when compared to HFD alone fed rats on day 21. Atorvastatin (10mg/kg/p.o) showed significant ($p<0.01$) decrease when compared to HFD group-2 rats.

CLINICAL STUDY

For the clinical study of Naanal karumbu chooranam in Athimetham 40 patients were selected. According to sex wise distribution 57.5% were in male, 42.5% were in female.

According to age wise distribution 17.5% were in 20-40 years, 52.5% were in 41-60 years, 30% were in 61-80 years.

OBSERVATION AND RESULTS OF CLINICAL STUDY

Gender distribution

Gender	No. of Cases	Percentage
Male (above 50)	23	57.5%
Female (above 45)	17	42.5%
Total	40	100%

Age distribution:

Age	No of cases	Percentage
20-40 years	7	17.5%
41-60 years	21	52.5%
61-80 years	12	30%

Food habits:

Food habits	No of cases	Percentage
Vegetarian	16	40%
Non-vegetarian	24	60%
Total	40	100%

IMPROVEMENT OF ATHIMETHAM (AFTER TREATMENT)

Lipid	Before treatment	After treatment	Improvement
T.Cholesterol	20(66.66%)	10(50%)	10(50%)

DISCUSSION

The drug Naanal karumbu chooranam (Saccharum spontaneum) was selected to find out its efficacy of hypo-lipidaemic activity in the management of Athi metham.

The literature evidence from the text, Gunapadam mooligai vaguppu, page no: 565 support the Hypo lipidaemic activity of the drug.

Phyto chemical study reveals review

As per the Phyto chemical analysis of Naanal karumbu chooranam showed the presence of alkaloids, flavanoids, saponins, tannins ,quinines,phenols,steroids,glycosides terpenes,coumarin and reducing sugars. These phyto components to elicit a wide range of biological activities which include hypolipidaemic and hypoglycemic, among others. Specifically saponin is known to elicit serum cholesterol lowering activity by causing resin like action, thereby reducing enterohepatic circulation of bile acids. In the process, the conversion of cholesterol to bile acid is enhanced in the liver resulting in concomitant hypo cholesterolemia. Modern literatures has reported, flavanoids, alkaloids, tannins are hypolipidaemic effects.

Bio chemical analysis of the drug Naanal karumbu chooranam reveals the presence of calcium, sulphate, iron, chloride,aminoacids, and starch.

Calcium

Possibly the calcium is binding with and preventing the absorption of dietary fat.

Sulphate

Chondroitin sulphate has lowered serum cholesterol levels and it reduced the risk of heart attacks.

In siddha gunapadam,

- Naanal karumbu chooranam
- Taste : Sweet
- Potency : Cold
- Bio Transformation : Sweet

Sweet has a tendency to increase the fatty substances. But here Naanal increases the HDL level and decreases the LDL level.

Pharmacological study:

In pharmacological study, Naanal karumbu chooranam (Saccharum spontaneum) significantly reduce the level of hyper lipidemias.

Studies like SEM and FTIR also reveals the particles size and peak value of Naanal karumbu chooranam.

Clinical assessment:

The clinical study of Naanal karumbu chooranam in Athi metham 40 patients were selected.

According to sex wise distribution 57.5% were in male, 42.5% were in females.

According to age wise distribution 17.5% were in 20-40 years, 52.5% were in 41-60 years, 30% were in 61-80 years.

The weight reduction obtained observation from this study shows that Naanal karumbu chooranam decreases the weight by progressive increasing the

dose. So this drug can therefore be used not only to decrease the lipid levels but to reduce obesity . It is well established that there is a strong link between hyper cholesterol, and obesity.

SUMMARY

The drug Naanal karumbu chooranam has been selected for this study to evaluate its efficacy in hypo lipidaemic activity in the management of Athi metham.

The literary evidence strongly supports the hypo lipidaemic activity of Naanal karumbu chooranam in the management of Athi metham.

The phyto chemical study review reveals presence of steroids,terpenes,proteins,coumarin, amino acids, alkaloid, flavonoid, saponin, tannin and reducing sugars.

Chemical analysis of the drug reveals the presence of chloride, calcium, sulphate, aminoacids, iron, and starch.

The pharmacological study shows that the drug has significant hypo lipidaemic activity at the dose level of 90 mg/kg

From the clinical study the drug Naanal karumbu chooranam reduced the increased level of serum total cholesterol,LDL, VLDL , TGL and increase the level of HDL. The Naanal karumbu is easily available in all season and method of preparation is easy and cost effective.

Conclusion

The pharmacological studies, literature evidence, Phyto chemical review, pharmacological studies and based on the observation of the clinical studies shows the drug Naanal karumbu chooranam (Saccharum spontaneum) has hypo lipidaemic activity and it is concluded that the Naanal karumbu chooranam can be used in the management of Athimetham.

Introduction

Of all the organisms that are existing on this earth, man undoubtedly is the most evolved form of God's creations. Man rules the world and stands superior to all. Still man is not free and is bounds by chains. He is highly vulnerable to the natural calamities and diseases.

A disease is a condition that impairs the proper function of the body or one of its parts, every disease has a cause, although the causes of some remain to be discovered. Some diseases are caused by the germs, some are caused by people's habits and some are caused by the deficiency of some vital nutrient.

Diabetes mellitus is one of the most common disease leading to complications.

In Siddha system, the disease, Diabetes mellitus can be correlated with Madhumegam. Diabetes mellitus is a clinical syndrome characterized by hyper glycaemia due to absolute or relative deficiency of insulin.

Diabetes mellitus single most important metabolic disease affect nearly every organ and system in the body. It has been projected that 300 million individuals would be affected with diabetes by the year 2025. By the year 2010,285 million people were affected by diabetes mellitus. At presently in india it is 19.4 millions individuals affected. People with diabetes 25 times more likely to develop blindness, 17 times more likely to develop renal disease, 30 times more likely to under amputation.

Madhumegam(Diabetes mellitus) is a chronic disease affecting different age group. Among them above forty years of age are most commonly affected by it.

Now a days there are lot of drugs available for diabetes mellitus in modern medicine. It gives quick remedies and quick side effects as well.

But in siddha literature there are lot of drugs said to cure and prevent madhu megam (Diabetes mellitus). Among those Kandhaga parpam is one of the well known drug choosen for clinical trial. The author hopes that this study will help the patients affected by Madhumegam.

AIM AND OBJECTIVES

Aim:

The aim of this dissertation is to establish that this drug ‘Kandhaga Parpam’ is an effective in madhumegam through biochemical, pharmacological studies and clinical trials.

The drug kandhaga parpam is indicated in pharmacopoeia of siddha research page no: 7,8.

Objectives:

The author has selected the ‘Kandhaga Parpam’ for the study of madhumegam, because of

- its availability
- its efficacy
- its safety in use
- and it is more economical one.

SULPHUR

Sulphur ‘S’ is a yellow non-metallic main group element belonging to the group VIb of the periodic table.

Atomic number	:	16
Relative atomic mass	:	32.06
Melting point	:	112.8 deg C
Boiling point	:	444.667 deg C
Relative density	:	2.07

- In the elemental state, sulphur exists in polymeric forms.
- Sulphur is essential element for living organisms, and is present in amino acids.

Discovery :

- Sulphur has been known since the beginning of history and is described in the Bible.
- Sulphur has been used by the greeks and romans as a fumigant and disinfectant.

Occurance :

Sulphur also occurs in many metal ores,

- Galena, pbs
- Zinc blende, zns
- cinnabar, Hgs
- stibnite, $sb_2\ s_3$

Copper pyrites $cu_2s.\ fe_2\ S_3$

Iron pyrites Fe_2S

- The important sulphate ores include

Gypsum, $caso_4$

heavy spar, $Baso_4$

Properties :

Rhombic Sulphur

Monoclinic Sulphur

Plastic Sulphur

Amorphous sulphur

Colloidal sulphur

CHEMICAL ASPECT

SULPHUR :

It occurs in nature stats as glistening yellow crystals. It also occurs in combination with other metals as sulphides. Such as golden yellow iron sulphide (Pyrite) the bronze yellow iron copper sulphide (Chalcopyrite) and the silver white lead sulphides (galena). In the absence of native sulphur deposits the sulphides are the important sources of the valuable substances.

Except the small quantities of sulphur obtainable as a sublimation product from the crater of Barren Island volcano in the Bay of Bengal and from the puga valley of Ladakh, the sources of natural sulphur in India. Can be almost negligible. These sources are too insignificant to meet the demands for sulphur in the country's the demand is met largely by imports.

Sulphur is widely distributed throughout the body as sulphydryl groups of cystine, disulphide linkages in protein and sulphate salts and esters found in mucopolysacchride and sulpholipids.

The minimum daily requirement of sulphur is 2-3g.

This requirement is met from normal plant and animal food stuff in the diet.

Conditions and actions

- Cathartic action
- Parasiticide in scabies
- Stimulant in alopecia
- fumigation
- Miscellaneous skin disease
- Sulphides used as depilatories.

Sulphur is an important element as it is an important component of a large number of natural and synthetic pharmaceutical aids and medicinal compounds. It is available in nature in free state or in combined form and geographically it is distributed in volcanic areas especially in sicilly and US where it is found in free state.

Iron pyrites, (Fes2) Gypsum Caso4. 2H2o and Baryte Baso4 are some of the important natural sources.

Sulphur is obtained by mining operations. Sulphate ores afford good sources of some valuable metals like antimony, mercury, bismuth, lead, zinc and molybdenum.

A large no of sulphur salts which may look as of insignificant value because they are cheap and easy available like sodium bisulphite, sodium metabisulphite find their utility in pharmaceutical preparations as antioxidants, preservatives and stabilizers. Sodium thiosulphate is an important antidote to iodine and cyanide being useful in different parasitic skin diseases.

SULPHUR :

kandhaga (sulphur) is of 4 different kinds according to its colour

a. The white variety has the appearance of khati (or) chalk, It is capable of incinerating a metal by besmearing the latter with white sulphur rubbed with a vegetable acid and then heating it by a putam.
b. The yellow variety is called the 'amala-sara'. It has the colour of the beak of a suka (parrot). It is best suited to the requirements of mercury and of medicines prepared with a view to cure physical decay and senility.
c. The red variety is best suited to the requirements of alchemy.
d. The black variety is very rare, it is capable of over coming senility and death.

Properties :

Sulphur arrests and cures physical decay and senility, it is sweet in taste, but turns pungent and hot, when digested in the stomach. It cures itches, leprosy, erysipelas and ringworm. It increases appetite and helps in digestion of food. It destroys mucus and eliminates it from the system. It does a way with poison and imparts potency to mercury. It destroys worms and is a greater tonic than even gold.

Purification of sulphur :

Sulphur contains 2 foreign matters. viz, particles of stone and poison. It is therefore to be purified very carefully. Impure sulphur gives rise to leprosy inflammation, giddiness, diseases due to an excess of pitham, loss of beauty, happiness, strength and semen.

Removal of colour from sulphur :

1st process :

Powdered sulphur is to be boiled with milk until it is condensed. It is then to be boiled with the juice of survavarta and then again with the decoction of triphala. Thus treated with gandhaga is deprived of its odour.

Second process :

Gandhaga is to be subjected to bhavana for three times with a solution of ¼ its quantity of tankanam dissolved with water and the juice of any one or more of the following devadali, amlaparnishunthi, darima and matulunga. The Gandhaga is again to be subjected to bhavana for 3 times in an iron pot with a liquid prepared by rubbing together the under mentioned particles with the juice of matulunya and then dissolving the paste like thing with castor oil, dhattura, black thulashi, rasona, devadali, root of shigru, kakamachi karpura. two kinds of shankhini, black aguru, kasturi vandhya karkoti all of equal quality.

This will render the sulphur devoid of odour and soft.

GUNAPADAM ASPECT

கந்தகம்

வேறு பெயர் : காரிழையின் நாதம், பரை வீரியம், அதீதப் பிரகாசம், பீஜம், செல்விவிந்து, சக்தி, சத்திபீசம், செந்தூரத்தாதி , தனம், தேவியுரம், நாதம், நாற்றம், பரைநாதம், பொன்வர்ணி, இரச சுரோணிதம்.

"பேரென்ற கேடரியென்றும் கவுனமென்றும் பேரு
பேரான, பிரோனித மென்றும் பேரு
ஆரென்ற சிறுமான வித்தென்றும் பேர்
அகவியென்றும் அறுசோகமென் அதீதப்பேரு
நானென்ற நவகந்தியென்றும் பேரு
நாற்பாச கந்தியென்று அதற்குப் பேரு
ஊறென்ற நாத பீச கந்தி யென்று ரைத்தோம்
புலத்தியனே கந்தியதன் பேரே"

வேறு பெயர் : கேடரி, கவுனம், பிரோணிதம், சிறுமான வித்து, அசுவி, அறுசோகம், நவகந்தி, நாற்பாசகந்தி

Taste (சுவை)	:	Bitter and Astringent(கைப்பு, துவர்ப்பு)
Potency(தன்மை)	:	Hot(வெப்பம்)
Action(செய்கை)	:	Tonic(உடல் தேற்றி)
		Laxative(மலமிளக்கி)
		Cholagogue(பித்த நீரை அதிகப்படுத்தும்)
		Diaphoretic
		Alterative

<u>பொது குணம் :</u>

"நெல்லிக்காய்க் கந்திக்கு நீள்பதினெண் குட்டமந்தம்
வல்லை கவிசை குன்ம வாயுகண்ணோய் - பொல்லா
விடக்கடிவன் மேகநோய் வீறுசுரம் பேதி

திடக்கிரசு ணீகபம்போந் தேர்”

நெல்லிக்காய் கந்தகத்தினால் பதினெண்குட்டம், மந்தம், கல்லீரல், வீக்கம், பெருவயிறு வகைகள் ஒன்றாகிய கவிசை, குன்மவாயு, கண்ணோய்கள், கொடுமையைச் செய்கின்ற விடக்கடிகள், நாட்பட்ட மேக நோய்கள், வாதசுரம், பேதி நாட்பட்ட கிரகணி, கபம் முதலியன நீங்கும்.

சுத்தி முறைகள் :

புளியம்படிவோட்டை பற்றியிருக்கும் கசிவை ஊற வைத்திலுத்த நீர், காடிநீர், புளித்த மோர், காளான்சாறு

வேறு

மருதோன்றி கல்கத்தை பசுவின் தயிரில் கலந்து புடமிடுதல்

வேறு

கந்தகத்தை ஒரு இரும்பு கரண்டியிலிட்டுச் சிறிசு பசுவெண்ணெய் இட்டு உருக்கிப் பசும்பாலில் சாய்க்கீகவும், இவ்விதம் 30 முறை செய்ய கந்தகம் சுத்தியாம். ஒவ்வொரு முறையும் புதிய பாலையே உபயோகிக்க வேண்டும்.

வேறு

பாலுக்கு பதில் வாழைக்கட்டை நீரில் கெந்தியைப் பத்துமுறை உருக்கி உருக்கிச் சாய்த்தெடுக்கச் சுத்தியாம். இம்முறையால் கந்தகத்திலுள்ள எண்ணெய் நீங்குமென்றும்,

கந்தகத்தின் பண்புகள் :

கந்தகம் - தாய் மகவை வளர்ப்பது போல நோய்களின் வெப்பத்தை மாற்றி உடம்பை தேற்றுவிக்கும்.

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1. The wealth of Indian Alchemy and its Medicinal uses
2. குணபாடம் தாது சீவ வகுப்பு பக்கம்: 302
3. பஞ்ச காவிய நிகண்டு பக்கம் : 70

1. கந்தகம் சேரும் பிற மருந்துகள்

2. கட்டிச் சொறி சிரங்கு காணும் சிரந்தி வகை குட்டங் குறைநோய் குடிரணமும் வட்டமிட்டே வந்த புரை புண்கள் வாய்கறி யோட்டயிடும் கெந்தகத்தின் பன்பிது வேகேன்.”

   கட்டி, சொறிசிரங்கு, கிரந்தி, குட்டம், குடிவிரணம், வட்டமிட்டு வருகின்ற செம்படை, கரும்படை தீரும்.

3. கந்தக மெழுகு - குன்றி அளவு - சர்க்கரையில் 2 வேளை

   தீரும் நோய்கள் : வெள்ளை, வெட்டை, பித்தம், மூலம், நீரிழிவு, மேகஊறல், சர்வபடை தீரும்.

4. கந்தக தைலம் -வேளை 5, 6 துளி சர்க்கரையில் 5 நாள்

   தீரும் நோய்கள் : குட்டம், காசம், குன்மம், விரணம், பாரீசவாயு, கைகால்பிடிப்பு, திடீர், செம்படை

5. கந்தக பற்பம் : அளவு ½ - ¾ குன்றி

   அறுபானம் : நெய், தேன்

   இருவேளை 3-5 நாள்

   தீரும் நோய்கள் : நீல்பிடிப்பு, குட்டம், சொறி சிரங்கு

கந்தகத் தைலம்- அனுபவ வைத்திய தேவ ரகசியம் பக்.எண்- 548

தண்டாமல ரகசியம் - அனுபவ வைத்திய தேவ ரகசியம் பக்.எண்- 548

வித்தியாதர தைலம் - அனுபவ வைத்திய தேவ ரகசியம் பக்.எண்- 548

குல்மோதர கனூராதி ரசம் - அனுபவ வைத்திய தேவ ரகசியம் பக்.எண்- 548

சுயமாக்கினி செந்தூரம் -அனுபவ வைத்திய தேவ ரகசியம் பக்.எண்- 548

கந்தக எண்ணெய் - கண்ணுசாமி பரம்பரை வைத்தியம் பக்.எண் 268,269

பதார்த்த குண விளக்கம் பக்கம் எண். 75

பதார்த்த குண விளக்கும் பக்க எண். 147.

BOTANICAL ASPECT OF SIRU KEERAI

Botanical name

Amaranthus tricolor

Kingdom	-	Plantae
Sub Kingdom	-	Tracheobionata
Super division	-	Spermatophyta
Division	-	magnoliophyta
Class	-	Magnoliophyta
Sub Class	-	Caryophyllidae
Order	-	Caryophyllales
Family	-	Amaranthaceae
Genus	-	Amaranthus
Species	-	tricolor

Distribution :

Originating in south central mexico, amaranth now has world wide distribution. It produces generous quantities of large tender and nutritious oval leaves. Those strains identified as vegetable amaranth are selected for their culinary attributes the other have been selected for their colorful foilage.

Component	Amaranthus
Dry matter	13.1 g
Food energy	36 cal
Protein	3.5 g
Fat	0.5 g
Carbohydrates	6.5g

Fiber	1.3g
Ash	2.6g
Calcium	267mg
Phosphorus	67mg
Iron	3.9mg
Potassium	417mg
vitamin A	6,100 I.U
Thiamine	0.08mg
Riboflavin	0.16mg
Niacin	1.4mg
vitamin ‘c’	80mg

Uses :

It acts as a coolant, refrigerant and cures many diseases. In the preparation of hair oils etc.

சிறுகீரை

Botanical name	:	Amaranthus tricolor , linn
வேறு பெயர்	:	சில்லி
Part used	:	தண்டு, கீரை, வேர்
Taste	:	Sweet
Potency	:	cold
Bio-Transformation	:	Sweet

Action

Diuretic	(சிறுநீர்பெருக்கி)
Refrigerant	(குளிர்ச்சியுண்டாக்கி)
Laxative	(மலமிளக்கி)

"கண்புகைச்ச நேரத்திரநோய் காசம் படலம்
புண்கிரிச்ச ரஞ்சோபை பொங்குபித்த - மண்பரவு
தாவரவிடங்களும் போம் தாழாத் திருவுமுண்டாம்
கூறு சிற கீரைதனைக் கொள்.

கண்புகைச்சல், கண்காசம், படலம், நீர் எரிச்சல், புண், வீக்கம், இரசத்தாலுண்டாகும் நஞ்சு, அழல்நோய் நஞ்சுகள் ஆகியவை போம். அழகு உண்டாகும்.

"சில்லியைப் பாகமாய்ச் செய்து தின் றிடவனற்
புல்லிய நோயெலாம் பொடிப்பொடி யாகுமே.

(அனல்) பித்த நோய் யாவும் ஒழிந்து போகும், நன்றாக சிறு நீரிறங்கும்.

"சில்லியை சமைத்துணத் தேக நோயிலதாய்
வல்லாமை பேசிட வாய்க்கு முத் தமமே"

நோயை போக்கி, வன்மையை தந்து, இனிய குரலையும் உண்டாக்கும்.

சிறு கீரை

வேறு பெயர்

"வசனித்தோம் நாகநாத மென்றும் பேரு
வளமான சாகிலியனென்றும் பேரு
நகனி த்தட ரோதய மென்றும் பேரு
நளினமென்ற, சாரிதங்களென்றும் பேரு
வெதனித்த ஒக்கனி மாதாரன்றும் பேரு
விளங்கியதோர், முகச் சுருதி என்றும் பேரு
தெசனித்த கனர் பாகம், கண்டி யென்றும் பேரு
தென்பான் சிறுகீலரயிதற்கும் பேரே.

வேறு பெயர் : நாகநாதம், சாகிலியன் தடரோதயம், சாரி தங்கள் ஒக்கனி மாதர், முகச்சுருதி, கனர்வாதம், கண்டி.

1.குணபாடம் மூலிகை வகுப்பு பக்க எண் 327, 328

2.பஞ்ச காவிய நிகண்டு - 157

சிறுகீரை சேரும் பிற மருந்துகள்

1. **மேக வாயிவிற்கு கியாழம் :**

சிறுகீரை வேர் : சேரும் சரக்கு

அளவு : வேளைக்கு 2 அவுன்ஸ் / நான்கு மணி நேரத்திற்கு 1 முறை / மூன்று நாள்

தீரும் நோய்: மேகவாயுவால் உண்டான கை, கால் பிடிப்பு வீக்கம், வலி, குடைச்சல்.

பத்தியம் : புளி தள்ளி, இச்சா பத்தியம்

2. **மிளகுத் தைலம் :**

தீரும் நோய்கள் : நாள்பட்ட வாத ரோகம்

சிரோபாரம்

புத்திமந்தம்

ஆவரித்தாவாதம்

கூச்சலிட்டு சொல்லும்படி செய்யும் செவிட்டு நோய்

அளவு : 2 வேளை/ 4 மணிக்கு 1 முறை தினந்தோறும்

கியாடிமிட்டு 3 நாளைக்கு கொடுக்க மஞ்சள் காமாலை குணமாகும்.

- பிள்ளைகளின் வரட்சி இருமல், நெஞ்சு நோக்காருக்கு நெய்
- நேரத்திர வாயு குழம்பு
- கண்மாங்கிச் அடைப்புக்கு மருந்து
- நயனரோக எண்ணெய்
- கறுத்த காய்ச்சலுக்கு மருந்து
- பிள்ளைகளின் காய்ச்சல் மருந்து

- ❖ சீறுகீரை சாறும் அதன் வேறும் பலவிதத் தைலம் கசாயம், சூரணத்திற்கு பயன்படும்.
- ❖ சிறுகீரை பருப்போடு சேர்த்து சாம்பார் கூட்டு பொரியல் செய்து பகல் உணவோடு உட்கொள்வது மிகவும் நல்லது.
- ❖ பாண்டு, நீர்கோவை, மகோதரத்திற்கு அடைக்கஷாயம்

சிறுகீரை வேர், சுரைக்கொடி, கரிசலாங்கன்னி, நீர்முள்ளி, கீழ்க்காய் நெல்லி, நெருஞ்சி சமூலம் வகைக்கு 10 பலம்.

சுத்த மண்டூரம் 20 பலம்

செய்முறை : இவைகளை நன்றாய் இடித்து குடிநீர் பாத்திரத்தில் போட்டு 8 படி நீர், 2 படி வற்றும் வரை சிறுக எரித்து ஆற வைத்து வாய்மூடி வைத்து கொள்க.

- சிறுகீரை கண்களில் ஏற்படும் நோயினை தீர்ப்பதில் சிறந்ததாகும்.
- சோகை, காமாலை, நீர்கோவை, மகோதரம், வீக்கத்திற்கு வியாழம்.

தீரும் நோய் :

சோகை, காமாலை, வீக்கம், நீர்கோவை, பாண்டு, மகோதரம், பீலிகம், வயிற்று பொருளில். மேற்பொசம் தீரம்.

குறிப்பு : பிணி கடினமான நிலையிலிருப்பின் கஷாயத்தில் முன் அயகாந்த செந்தூரம், மண்டூர செந்தூரம், தேனில் கொடுக்க வேண்டும்.

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1. தேரையர் தைல வர்க்கம் பக்க எண் : 70
2. எளிய வைத்திய முறை ___ 300
3. கண்ணுசாமியில் பக்க எண். 66

BOTANICAL ASPECT OF MULLU KEERAI

Botanical Name	-	Amaranthus Spinosus
Kingdom	-	Plantae
Sub Kingdom	-	Tracheobionata
Super division	-	Spermatophyta
Division	-	Magnoliophyta
Class	-	magnoliophyta
Sub-class	-	caryophylidae
Order	-	Caryophyllales
Family	-	Amaranthaceae
Genus	-	Amaranthus
Species	-	spinosus

Distribution :

It is distributed in many parts of Asia.

Chemical Constituents :

Spinoside

New Coumaroyl flavone glycosides

Lectins

betacyanins

phenolic compounds.

Uses :

1. Traditionally used to treat various disease.
2. The leaves are used as a laxative and applied as an emollient poultice to abscess, boils and burns and are reported in antimalarial, anti-oxidant and anti hepatotonic actions.

GUNAPADAM ASPECT OF MULLU KEERAI

முள்ளிக்கீரை

Botanical name : Amaranthus spinosus

வேறு பெயர் : குப்பைக் கீரை

முள்ளுக் கீரை

Vernacular names:

Eng	:	Thorny Greens, prickly amaranth
Tel	:	Mundla – tola – kuara
Duk	:	Kante – mat
Mal	:	Mullan – chira
Kan	:	Kanta – nati
Part used	:	Leaves, root, whole plant
Taste	:	Pungent
Potency	:	hot
Bio-transformation	:	Pungent

Action

Demulcent **(உள்ளடிலாற்றி)**

Stomachic **(பசித்தீத்தூண்டி)**

பொது குணம் :

நீரைப் பெருக்கிவிடும் நீடனலைத் தானெழுப்பும்
பாரநறுந் தங்கத்தைப் பற்பிக்கு - நேரே
விடவிருக்கும் பொற்றட்டை மேவுமல்குன் மாதே
அடவிநிற்கு முள்ளிக்கீரை

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1. குணபாடம் மூலிகை பக்க எண். 342

ARAIKEERAI

Botanical Name : Amaranthus tristis

Kingdom : Plantae

Order : Caryophyllales

Family : Amaranthaceae

Genus : Amaranthus,

Species : Tristis

Distribution :

It is also known as Elephant head amaranth. It is an annual flowering plant with deep purple flowers. It can grow from 2-3 feet in ht. cultivated as a pot herb in India.

Chemical constituents :

	Protein	3.5%
	Fat	0.24%
	Carbohydrates	6.6%
(Green variety in April)	Water	90.6%
	Ash	23.98%
	Nitrogen	4.42%
	Phosphoric acid	1.47%
	Silicates	2.58%
(Green variety – November)	Water	82.60%

Fat	4.50%
Albuminoids	25.72%
Carbohydrates	36.84%
Fibre	11.89%
Ash	21.05%
Nitrogen	4.12%
Phosphoric acid	1.35%
Silicates	2.20%

Uses :

This seed oil may be of benefit for those of hypertension and cardio vascular disease, regular consumption reduces blood pressure and cholesterol levels while improving anti oxidants.

அறுகீரை

வேறு பெயர் : அறைகீரை

Botanical name : Amaranthus tristis

Vernacular names :

Tel	:	Koiua – kura	Raj	-	Lalru, chalai
Mal	:	Arakirai	Punj	-	Bathua, Baglan
Kan	:	Harive sappu	Beng	-	Dengo, Dengua – Sag
Urd	:	Mat-ki-Bhaji	Assam	-	Ranga sak santal.

(பயன்படும் உறுப்பு) : கீரை, விதை

Part used : Whole plant, seeds

Taste : Sweet

Potency : hot

Bio transformation : Sweet

Action :

Stimulant (வெப்பமுண்டாக்கி)

Aphrodisiac (காமப்பெருக்கி)

பொது பண்பு :

அறுகீரை பத்திய மாகு மேற்றண்டின்

மறுகீரை வாத மழைவெனப் பட்டதே

இது பத்தியத்திற்கு உதவும், கீரைத்தண்டு வளி ஐயக் குற்றங்களை உண்டாக்கும்.

"காய்ச்சல் குளிர்சன்னி சுபநோய் பல பிணிக்கும்

வாய்ச்ச கறியாய் வழங்குங்காண் - வீச்சாய்க்

கறுவுமோ வாயுவினங் காமமிக வுண்டாம்

அறுகீரை யைத்தின் றறி."

இது தென்னாட்டில் பல பிணிகளுக்குப் பத்திய பதார்த்தமாக வழங்கப்படும்.

அரைக்கீரை சேரும் பிற மருந்துகள்

- தைலவகைகளுக்கு பெரிதும் பயன்படும் அரைக்கீரை உஷ்ண வியாதிகளுக்கு நல்ல மருந்து.
  பருப்போடு மிளகும், நெய் அல்லது எண்ணெய் சேர்ந்து பொரித்தோ, மசித்தோ உண்டால் மலச்சிக்கல் தீரும்.
- அறுகீரை விதை தைலம்

இதை நீர் போக்கிய தேங்காய்க்கும் செலுத்தித்தமரிட்டு சதுப்பு நிலத்தில் புதைத்து 40, 50 நாள் சென்ற பின் எடுத்து ஓட்டை நீக்கி மற்றவைகளை நல்லெண்ணெயுடன் கூட்டி எரித்து, தைலம் வடித்து தலை முழுகி வர தலைபிபளுவு போம். தலைமயில் கறுத்து வளரும்.

- அறுகீரை பத்திய பதார்த்தங்களில் ஒன்றாக கூறப்பட்டிருப்பினும் வாத கபதேகிகட்கே அவிழ்த்தவர்கள் சாப்பிடும் காலத்தில் சேர்த்துக் கொள்ளலாம்.

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1. அகத்தியர் குணவாகடம்

2.குணபாடம் மூலிகை பக்கம் எண் - 56, 57

BOTANICAL ASPECT

Oryza sativa

Kingdom	:	Plantae
Division	:	Angiosperms
Class	:	Monocots
Order	:	Poales
Family	:	Poaceae
Genus	:	Oryza
Species	:	sativa

Habitat :

This is a principal food crop of India, Ceylon, Burma, China, Japan and siam and is spread over the tropical and sub tropical regions of both hemisphere.

Varieties :

There is 100 varieties of rice ie: Bhura, Hemdi, Rata, Tamsal, Ghosavel, Karisal, Gudhya, Tulsia, Rajavel bodka, Velari, Varangal, Dodka, Kand, Ponwel, Wakgel, Kamod, tiresal, Rankhali are few of the scented varieties.

Constituents :

Rice contains more starch than any other starchy grains but no appreciable fat a very small quantity of proteins and a trace of mineral matter rice contains 48.55% cellulose and the rest beta and gamma cellulose.

In rice there is an alkaloid oriaice as 7mg in 100g ash of corn, of total protein 5 p.c present in rice global is 0.14albumin 0.04 and remainier is a protein which like the gluterin of wheat is soluble in dilute alkali.

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1. Indian Materia Medica.

Unmilled rice contains 2-3 pc of oil, but in the process of pollishing many of this oil is removed with the aleurone layer. Bran from rice mills contains a considerable amount of oil. Oil is extracted from the bran is highly acid the acid value being 34.75 p.c.

Approximate composition of the total fatty acids is palmitic 20, oleic acid 45 and is olinoeic acid 35 p.c. natural or unmilled rice contains 3 times the food value of white rice. milled rice is found to be the cause of beriberi among Indian living on such rice.

நெல்

Botanical name : oryza sativa, Linn

வேறு பெயர் : **தோரை, வை, விரிகி, செந்நெல், சாலி, வரி**

Vernacular names

Eng : Paddy

Tel : Vari

Mal : Nella

Kan : Bhatha

Arab : Arruz

Hind : Chaval

Duk : Dhan

Sans : Vrihi

Part Used : Rice, husk

Taste : Sweet

Potency : cold

Bio-transformation: Sweet

Action :

அரிசி

Nutrient (உடலுரமாக்கி)

கஞ்சி

Demulcent (உள்ளழலாற்றி)

Refrigerant (குளிர்ச்சியுண்டாக்கி)

அரிசிகளின் பொது குணம் :

"செந்நெல் வகைக்குஞ் சிறுதா னியவகைக்கும்
இந்நிலத்தி லுண்டோ இலக்கென்ப ___ உண்ணுங்கால்
கண்டம்ட்டி லேபெயராங் கண்ட அவரவர்கள்
உண்டமட்டி லேசுவையாம் ஒது.

பச்சை அரிசி பொதுகுணம் :

சுத்த அனிலமந்தத் தோன்றுமெரி பித்தம் போம்
பத்தியத்தில் எண்ணார்கள் பண்டிதர்கள் - மெத்தவுமே
வைச்சுமை தாங்க வலியுண்டாந் தேகத்திற்
பச்சரியைப் புசித்துப் பார்.

பத்தியத்தில் விலக்கான பச்சை அரிசியினால் மந்தம் உண்டாம், மிகுந்த பன்மை உண்டாகும். பித்த எரிச்சல் நீங்கும்.

புழுங்கல் அரிசி பொது குணம்

புழுங்கல் அரிசியது புத்திரார்க்கும் ஆகும்
அழுங்குகின்ற வாயுவிற்கும் ஆகும் -ஒழுங்காய்
நிலைத்தபத்தி யத்திற்கும் நீட்டலாம் -மெய்க்குப்
பலத்தைக் கொடுக்காது பார்.

இஃது குழந்தைகள், வளிநோயினர், மருந்துண்போர் இவர்களுக்கு உதவும், உடலுக்கு உறுதி இல்லை.

பழமை அரிசி பொது குணம்

"பழவரிசி மூத்தோர்க்கும் பாலர்கட்கும் ஆகும்
அழல் மகிவும் ஆகும் அருந்தில் நிழலைப் போல்
ஆகும் உடல் குளிர்ச்சி ஐயமறும் நோயுற்றோர்க்
காகும் பன் னோய்போம் அறி.

1.அகத்தியர் குணவாகடம்

2.குணபாடம் மூலிகை பக்கம் எண் - 598 599 604 605

AMARANTHUS SPINOSUS(MULLUKEERAI)

AMARANTHUS TRICOLOR(SIRUKEERAI)

AMARANTHUS TRISTIS(ARAIKEERAI)

ORYZA SATIVA(RICE)

SULPHUR(KANDHAGAM)

KANDHAGA PARPAM

SIDDHA ASPECT OF DISEASE MADHUMEGAM

வேறு பெயர்:

மதுமேகம்

இனிப்பு நீர்

இயல்:

அடிக்கடி சிறுநீர் பெருவாரியாய் இழிதல், நீரிழிந்த இடத்தில் ஈ., எறும்புகள் மொய்த்தல், அதனை காய்ச்சினால் சர்க்கரை மணம் வீசல், உடல் நாளுக்கு நாள் இளைத்தல் என்னும் இயல்புடைய நோயாகும்.

நோய் வரும் வழி:

நீரிழிவு நோய் அளவு கடந்த கலவியால் மேகத்தைத் தொடரச் செய்து வரும் நோய் எனக் கொள்ளப்படும். அன்றியும் மிகு உணவு, சோம்பித் திரிதல், மனக்கலக்கம், பொருளின் மீது மிகுந்த இச்சை என்னும் இவற்றாலும், தாய் தந்தையின் வழியாகவும் வரக்கூடுமென அறிதல் வேண்டும்.

முற்குறிகள்:

சிறுநீர், தெளிந்த நீர்போல் அடிக்கடி படிக்கணக்கில் இழிதலும், இழிந்த நீர்த்துளிகள் சற்று உலரின் பிசுபிசுத்துக் காணுதலும், உடல் வன்மை நாளுக்கு நாள் குறைந்து கொண்டே வருதலும், நாவறட்சியும் ஆகிய முற்குறிகளைக் காட்டும்.

நோயின் குறிகுணங்கள்

- ❖ நீர் மிகுந்த அளவில் இறங்கும்.
- ❖ நீரின் நிறம் - தண்ணீரைப்போலும்

  நிறை – அளவு கடந்தும்

  எடை – கனத்தும்

  மணம் - தேன்போலும் காணும்
- ❖ நெய், பால் உண்டாலும் உடல் ஊட்டம் தராமை,
- ❖ மூச்சு, வியர்வை இவற்றில் தேன் மணம் வீசல்.
- ❖ கண்ணில் திரையுண்டாதல் (படலம்)
- ❖ சிறுநீர் நாளுக்கு நாள் குறைந்து நீர்கட்டு நோயை உண்டாக்கும்.
- ❖ பிறகு படுக்கையில் கிடத்தி இருமல், இரைப்பு, இளைப்பு. தமரகவாயு, நரம்பு தளர்ச்சி முதலிய நோய்களைத் துணைக்கொண்டு கொல்லும்.

குற்ற வேறுபாடுகள்:

ஐயம் தன்னிலையில் கேடடைந்து, 7 உடற்கட்டுகள் ஒன்றன்பின் ஒன்றாக கேடடைந்து, பல வகைப்பட்ட நோய்களையும் முதல் நோய்க்கு துணையாக்கும்.

"குறியுடனே மேகந்தான் கொடுமை செய்து"

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14. நாடிநூல்

முடிவு:

மேகநீர் அல்லது நீரினைப் பெருக்கல் நோய்கள் 20.

இதில்'

வளிக் குற்றத்தால் வருவது - 4

அழல் குற்றத்தால் வருவது - 6

ஐயக் குற்றத்தால் வருவது - 10

மதுமேகம், மேகநீர் இருபதினில் அழல் குற்றத்தில் அடங்கும்.

''தன்மையாய்ச் சலந்தானும் பசுப்பு மஞ்சள்
தானிறங்கும் பீசமுங்கோ சமுங்கடுக்கும்
அண்மையா யிடிக்கடிக்கு நீரிறங்கு
மடிக்கடிக்கு அரைநாழி தனிலே காணும்
வெண்மையா யழயதனிறி றான்பி டிக்கும்
மிக்கான சடம்வெளுத்து மேனி கன்றும்'
பண்மையாய்ப் பஞ்சவாண் டதனிற் கொல்லும்
பகர்கின்ற மதுமேகப் பாங்குதானே''

இந்நோயில் வேளைக்கு அரைப்படி அளவாய் அடிக்கடி நீரிழியும். நீரிறங்கும் போதெல்லாம் நீர்ப்புழை கருத்து, விரை நோகும். நீரைக் காய்ச்சின் தேனின் மணமுண்டாகும்.

Modern Aspect

DIABETES MELLITUS

Definition

It is a clinical syndrome characterised mainly by polyuria, polydipsia, and polyphagia due to absolute deficiency of insulin or diminished biologic effectiveness of it or both.

Classification:

1. Primary diabetes mellitus
2. Secondary diabetes mellitus

Primary Diabetes mellitus:

Insulin dependent diabetes mellitus, immune dependent diabetes mellitus(IDDM) or type I or insulinopenic or juvenile on set diabetes (JOD) 1-20%. In some individuals in later life a slow progression to insulin deficiency only occurs which is called Latent Auto immune Diabetes of Adults (LADA).

Non- insulin dependent diabetes mellitus, non immune dependent diabetes mellitus(NIDDM) (or) maturity onset diabetes mellitus(MOD) (or) Type II diabetes 80-90%

Type II Diabetes may be a gain of two types

- Obese:

Here Diabetes is secondary to extra pancreatic factors which lead to insensitivity to endogenous insulin. This is a mild form of diabetes which is non-ketotic and is

seen mainly in adults. This ineffective insulin action also results in pancreatic Beta cell dysfunction.

- Non-obese:

These patients generally show a blunted response or no response as regards insulin secretion after glucose load but albeit to other insulinogenic stimuli eg. Iv sulfonyl urea, glucagon or secretin. Upto now five types of this syndrome have been identified.

- Mody 1
- Mody 2
- Mody 3
- Mody 4
- Mody 5

Secondary Diabetes Mellitus:

1. Non-pancreatic endocrine disorders as in Acromegaly, cushing's syndrome, thyrotoxicosis, phaeochromocytoma, glucagonoma etc.
2. Pancreatic diseases like chronic pancreatitis, carcinoma of pancreas, haemochromatosis,pancreatic calculi, cystic fibrosis, pancreatectomy .
3. Gestational diabetes, 80% of them develop diabetes, antiretroviral protease inhibitory antipsychotic drugs may produce.
4. Iatrogenic:

After use of Thiazide diuretics, steroids, phenytoin,, contraceptive pills etc.

5. Diabetes due to genetic effect

e.g Down's syndrome, muscular dystrophy, friedreich's disease, DIDMOAD (Diabetes inspidus, optic atrophy, (Nerve Deafness), Lipoatrophy.

Classification of Diabetes by British Diabetic association :

- Potential Diabetes(pre diabetes)
- Latent Diabetes
- Chemical Diabetes
- Clinical Diabetes

Aetiology:

Primary Diabetes mellitus is a heterogenous disorder and the cause of islet cell dys function is far from clear in most of the cases.

- Age:

  NIDDM occurs chiefly in middle aged individuals 50% of the cases are first diagnosed at the age of 50 years.

- Sex:

  Both sexes suffer equally but in lower age groups males and in middle age groups females are more affected.

- Heredity:

  It may run in familiar but more is conflicting evidence for the mode of inheritance, NIDDM has a greater hereditary component.

- Stress and Strain:

  Physical and mental stress or strain may be responsible at least in precipitating the latent form of the disease as counter regulatory hormones are secreted in excess.

- Obesity:

  Many maturity onset diabetics are obese but still it is not settled whether it has a cause or effect relationship.

Text Book of Medicine P.C. DASS; P.K. DASS Page no. 485,486,487

Clinical Features

Onset is usually gradual but rarely there may be acute onset,

- Polyuria:

  The amount of urine may be several litres in 24 hours. This is due to excessive sugar in the urine which acts as a diuretic. There may be nocturia also.

- Polydipsia or excessive thirst

  Patient may consume several litres of water in 24 hours to quench thirst. This is obviously the effect of polyuria and hyper osmolarity of blood. Blurred vision is also due to it.

- Polyphagia or Excessive hunger:

  Patient always feels hungry and may have a craving for carbohydrates food, sweet, honey, sugar, rice etc.

- Rapid emaciation
- Dryness of mouth and throat
- Constipation
- Intense itching

Complication of Diabetes:

- Vascular complications
- Renal complications
  - Pyelonephritis
  - Renal arteriosclerosis
  - Papillitis necroticans

- Neurological complications
    - Peripheral neuritis (30%)
    - Autonomic imbalance
    - Diabetic amyotrophy
    - Mononeuritis multiplex
    - Polyneuritis cranialis
    - Charcot's joint
    - Pseudo tabes

Different cerebro-vascular accidents.

- Sexual and Genital complications
- Pulmonary complications
- Effects on pregnancy and neonates
- Ocular complications
    - Diabetic retinopathy
    - Iritis rubeosa
    - Glaucoma
    - Pupillary changes
- Skin complications
- Keto complications
- Lactic acidosis
- Complications of foot
- Complications of drug

Collection of the drug:

The raw drugs sulphur, sirukeerai, araikeerai, mulli keerai and raw rice are collected from tirunelveli market and town.

Preparation of the drug:

Nellikai kandhagam sufficient quantity is powdered and put in a mud pot. Araikeerai juice sufficient quantity is poured in the pot, boiled gently until the juice is almost dried or reduced considerably. The pot is removed from the fire, poured cold water plenty, washed well repeatedly with cold water and dried.

Like wise the same process is repeated with raw rice, araikeerai juice, mullikeerai and sirukeerai juice in the same manner. Then the parpam is grind and kept in air tight container.

Color **:** white Yellow

Smell **:**No Smell

Dose **:**100 mg , bd, after food

Adjuvant **:** Luke warm Water

Duration **:**40 days

Indication **: Diabetes Mellitus (Madhumegam)**

1.Pharmacopoeia of siddha Research Page no. 7,8

PHYSICAL PROPERTIES FOR KANDHAGA PARPAM

The standardization parameters of Kandhaga parpam, done at Sastra university thanjavur-401,

The tests done are as follows.

Loss on drying@ 105^0 C:

Five gram of Kandhaga parpam is heated in a hot oven at 1000 C to constant weight. The percentage of loss of weight was calculated as 3.59 %.

Determination of ash value:

Weighed accurately 2 grams of Kandhaga parpam in tarred platinum or silica dish and incinerate at a temperature not exceeding 450^0C until free from carbon, cooled, and weighed. Calculate the percentage of ash as 26.96% with reference to the air dried.

Acid in soluble ash:

Boiled the ash 5 minutes with 25 ml of dil HCl. Collect the insoluble matter in gooch crucible on an ash less filter paper wash with hot water and ignite. Cooled in a dessicator and weighed. Calculated the percentage of acid insoluble ash as 9.02% with reference to the air dried drug.

SHANMUGHA ARTS, SCIENCE, TECHNOLOGY & RESEARCH ACADEMY (SASTRA)
(A University established under Section 3 of the UGC Act, 1956)
SASTRA University Tirumalaisamudram, Thanjavur-613401.
Centre for Advanced Research in Indian System of Medicine (CARISM)
GOVT. APPROVED DRUG TESTING LABORATORY APPROVAL No. R.DIS.NO.:282/2010

CERTIFICATE OF ANALYSIS

Name of the Product: 092-Kandhaga Parpam
Date of Sampling : 09.10.12

Report No : CAR/DTL/PAR071
Report Date: 18.12.12

PHYSICO-CHEMICAL STANDARDISATION

S.No	TESTS	AS PER ANALYSIS
1.	Description	white yellow powder
2.	Loss on Drying at 105°C	3.59%
3.	Total Ash	26.96%
4.	Acid Insoluble Ash	9.02%

ANALYST

LAB IN-CHARGE

ASSOCIATE DEAN & CO-ORDINATOR

BIO-CHEMICAL ANALYSIS OF PREPARATION OF THE EXTRACT

Kandhaga parpam 100mgs of parpam is weighed accurately and placed into a clean beaker and added a few drops of conc. Hydrochloric acid and evaporated it well. After evaporation cooled the content and added a few drops of conc Nitric acid and evaporated it well. After cooking the content add 20ml of distilled water and dissolved it well. Then it is transferred to 100ml volumetric flask and madeup to 100ml with distilled water. Mix well. Filter it then it is taken for analysis.

QUALITATIVE ANALYSIS:

Sl. No.	Experiment	Observation	Inference
1.	TEST FOR CALCIUM 2ml of the above prepared extract is taken in a clean test tube. 2ml of 4% Ammonium oxalate solution is added to it.	A white precipitate is formed	Indicates the presence of calcium
2.	TEST FOR SULPHATE 2ml of the extract is added to 5% barium chloride solution.	A white precipitate is formed	Indicates trace amount of sulphate is present.
3.	TEST FOR CHLORIDE The extract is treated with silver nitrate solution.	A white precipitate is formed	Indicates the presence of chloride
4.	TEST FOR CARBONATE : The substance is treated with concentrated HCL	Brisk effervescence is formed	Indicates the presence of carbonate.
5.	TEST FOR STARCH The extract is added with weak iodine solution.	No blue colour develops	Absence of starch

6.	TEST FOR ZINC The extract is treated with potassium ferro cyanide	No white precipitate is formed	Absence of zinc
7.	TEST FOR IRON FERRIC The extract is treated with concentrated Glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric iron
8.	TEST FOR PHOSPHATE The extract is treated with ammonium Molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of phosphate
9.	TEST FOR ALBUMIN The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Absence of Albumin
10.	TEST FOR TANNIC ACID The extract is treated with ferric chloride.	No blue black precipitate is formed	Absence of Tannic acid
11.	TEST FOR UNSATURATION Potassium permanganate solution is added to the extract.	It doesnot get decolourised	Absence of un saturated compound.
12.	TEST FOR REDUCING SUGAR 5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2mts and added 8-10 drops of the extract and again boil it for 2mts.	No colour change occurs	Absence of reducing sugar.
13.	TEST FOR AMINO ACID One or two drops of the extract is placed on a filter paper and dried it well. After drying 1% Ninhydrin is sprayed over the same and dried it well.	No violet colour develops.	Absence of Amino acid.

PHARMACOLOGICAL ANALYSIS

Hypoglycaemic study:

As per Siddha Literature, Kandhaga parpam is indicated for Madhumegam in pharmacopoeia of siddha research.

Reasons for choice of rabbit

1. Can be handled easily
2. Several number of blood samples can be taken predictable than rat or mice.

Aim

To evaluate hypoglycaemic activity of **Kandhaga parpam**

Materials and Methods

Preparation of the test drug:

The test drug 2gms of Kandhaga parpam was suspended in 20ml of hot water 10ml of test drug was given to test group.

Procedure

Six healthy young rabbits fasted for 18 hours weighing 1-1 ½ were selected. They were made to fast for more than 18 hours before the drug administration. Rabbits were kept in a clean condition. Before drug administration, blood samples were collected from marginal ear vein of rabbits at o hr for blood sugar analysis. The 6 rabbits are divided into 3 groups. Each group containing 2 rabbits.

First group rabbits received 10 ml of water and kept as a control group. The second group rabbits received dianil 3mgs body weight and kept as standard group.

Third group rabbits received 1gm test drug. Then the blood samples were collected at 1 ½ hrs and 3 hrs after drug administration. During the experiment period the rabbits were not allowed to drink even water. Blood sugar was estimated according to Enzymatic method.

Results

Details of experiment and results are shown in the table.

Name of drugs/ Groups	**Dose per kg of body weight**	**Value of Fasting samples**	**Value of P.PL. Samples after 1 ½ hr**	**Reduction difference in mgs**	**Percentage reduction**	**Remarks**
Control (water)	5ml	72mgs	72mgs	-	-	
Standard (Dianil)	1mg	109mgs	62mgs	47mgs	43.1mgs%	
Test drug (Kandhaga parpam)	20mgs	127mgs	113mgs	14mgs	11.2mgs%	Significant action

Inference:

The drug Kandhaga parpam shows reduction in blood sugar level when compared with standard drug. So Kandhaga parpam has got **significant hypoglycaemic action.**

ANTI – MICROBIAL (BACTERIAL) ACTIVITY OF KANDHAGA PARPAM

Aim

To identify the anti-microbial (Bacterial) activity of kandhaga parpam against Streptococcus,Staphylococcus,pseudomonas and Ecoli.

Medium: Muller Hinton agar

Components of Medium

Beef extract	:	300gms/lit
Agar	:	17gms/lit
Starch	:	1.50gms/lit
Casein Hydroxylate	:	17.50gms/lit
Distilled Water	:	1000 ml
pH	:	7.6

Procedure

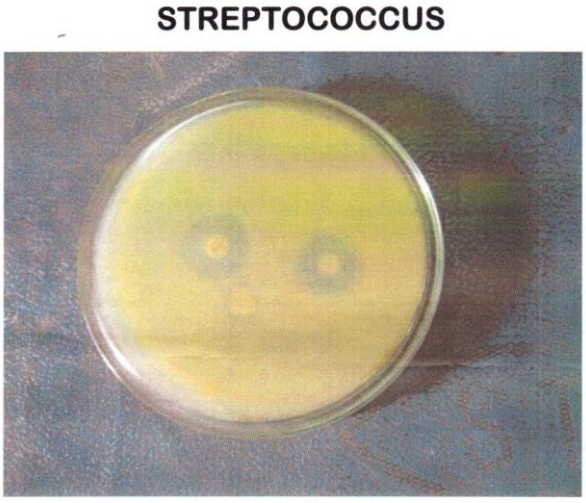
The media was prepared from the above components and poured and dried on Petri dish. The organism was streaked on the medium and the test drug (1gm drug in 10ml of Water) was placed on the medium. This is incubated at 37^0C for one over night and observed for the susceptibility shown up clearance around the drug.

Table : Anti-microbial susceptibility test report

No.	Organism	Susceptibility	Zone of inhibition in mm
1.	Staphylococcus	Resistant	-
2.	Pseudomonal	Resistant	-
3.	E.coli	Resistant	-
4.	Klebsiella	Resistant	-
5.	Proteus	Resistant	-
6.	Streptococcus	Moderately sensitive	8 mm
7.		Resistant	-

Result

The test drug Kandhaga parpam was sensitive against streptococcus



TOXICOLOGICAL STUDY

Test Drugs

The Kandhaga parpam was used in the study was processed by the methods prescribed in standard text books of siddha medicines Gunapadam Mooligai vaguppu.

Preparation of drug for dosing

All drugs used for the study was suspended each time with 1% (w/v) solution of sodium carboxy methyl cellulose before administration.

Drugs and chemicals

Standard Drugs and fine chemicals used in these experiments were obtained from Sigma Chemicals Company, U.S.A. Other analytical grade chemicals were obtained from S.d. Fine Chemicals Ltd., Mumbai.

Experimental animals

Colony inbred animals strains of wistar rats of either sex weighing 200 - 250 g were used for the pharmacological and toxicological studies. The animals were kept under standard conditions 12:12 (day/night cycles) at 22^0C room temperature, in polypropylene cages. The animals were fed on standard pelleted diet (Hindustan Lever Pvt Ltd., Bangalore) and tap water *ad libitum*. The animals were housed for one week in polypropylene cages prior to the experiments to acclimatize to laboratory conditions.

Acute oral toxicity study

Acute oral toxicity was conducted as per the OECD guidelines (Organization of Economic Cooperation and Development) 423 (Acute Toxic Class Method). The acute toxic class method is a stepwise procedure with 3 animals of a single sex per step. Depending on the mortality and /or moribund status of the animals, on the average 2-4 steps may be necessary to allow judgement on the acute toxicity of the test substance. This procedure results in the use of a minimal number of animals while allowing for acceptable data based scientific conclusion.

The method uses defined doses (5, 50, 300, 2000 mg/kg body weight) and the results allow a substance to be ranked and classified according to the Globally Harmonized System (GHS) for the classification of chemicals which cause acute toxicity

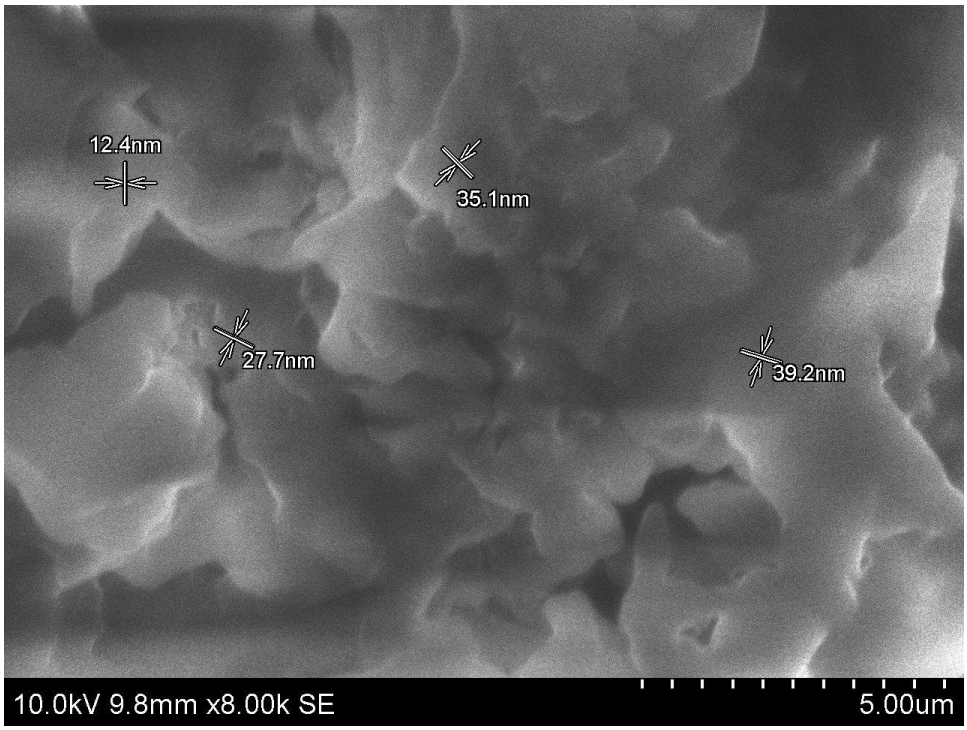
Wistar albino rats of either sex weighing 200-250 g were fasted overnight, but allowed water ad libitum. Since the formulation is relatively non toxic in clinical practice the highest dose of 2000 mg/kg/p.o (as per OECD guidelines "Unclassified") was used in the acute toxicity study.

The animals were observed closely for behavioural toxicity, if any by using FOB (Functional observation battery).

SEM

A **scanning electron microscope** (**SEM**) is a type of electron microscope that produces images of a sample by scanning it with a focused beam ofelectrons. The electrons interact with electrons in the sample, producing various signals that can be detected and that contain information about the sample's surface topography and composition. The electron beam is generally scanned in a raster scan pattern, and the beam's position is combined with the detected signal to produce an image. SEM can achieve resolution better than 1 nanometer. Specimens can be observed in high vacuum, low vacuum and in environmental SEM specimens can be observed in wet condition.

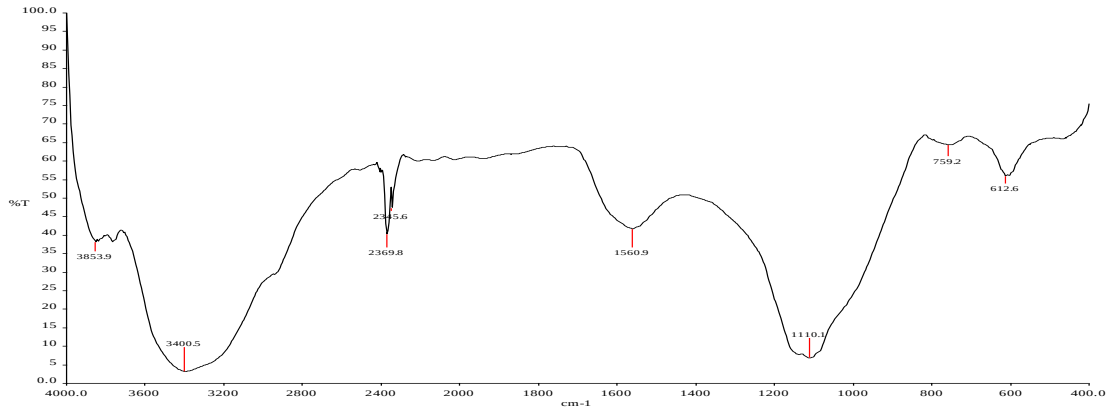
38.8 nm size for kandhaga parpam



Fourier Transform Infrared Spectroscopy

Fourier transform infrared spectroscopy is a technique. It is used to find an infrared spectrum of absorption, emission, photoconductivity or Ramanscattering of a solid, liquidor gas. An FTIR spectrometer simultaneously collects spectral data in a wide spectral range. This confers a significant advantage over a dispersive spectrometer which measures intensity over a narrow range of wavelengths at a time. FTIR has made dispersive infrared spectrometers all but obsolete (except sometimes in the near infrared), opening up new applications of infrared spectroscopy.

Kandhaga Parpam



SP 3601 4000.0 400.0 3.1 100.0 4.0 %T 4 2.0

PT REF 4000 100.0 2000 60.7 600

3853.9 38.2 3400.5 3.1 2369.8 40.3 2345.6 47.4 1560.9 41.7

1110.1 6.7 759.2 64.3 612.6 55.9

END 8 PEAK(S) FOUND

Anna University, Chennai

SOPHISTICATED ANALYTICAL INSTRUMENT FACILITY

IITM,CHENNAI-36

PERKIN ELMER OPTIMA 5300DV ICP-OES

SampleID	Analyte	Mean
Kandhaga Parpam----------		
	As193.696	BDL
	Bi 306.772	05.158 mg/L
	Cd 226.502	BDL
	Cu 324.754	05.181 mg/L
	Co 228.616	04.568 mg/L
	Fe 238.204	24.148 mg/L
	Hg253.652	3.751 mg /L
	Ni 58.693	BDL
	Pb 230.204	BDL
	S 181.975	912.148 mg/L
	Sb 206.833	21.458 mg/L
	Zn 213.856	15.484 mg/L

CLINICAL ASSESSMENT

A phase 2 clinical trail on the hypoglycaemic activity of Kandhaga parpam in treating Madhumegam was carried out at the Govt.Siddha Medical College Hospital, Palayamkottai.

40 Cases with clinical signs and symptoms of Madhumegam at both sexes with age ranging from 40-75 years are selected and treated under the guidance at the Head of the Department, Post-Graduate Department of Gunapadam, Govt.Siddha Medical College, Palayamkottai. 30 cases were treated as out patients and 10 cases were treated as inpatients.

The patients were selected as Madhumegam according to the following including and excluding criteria.

Criteria for Case Selection.

Inclusion Criteria:

1. Polyuria
2. Polyphagia
3. Poly dipsia
4. Nocturia
5. Tiredness and general weakness
6. Giddiness
7. Pruritus
8. Numbness and Burning Sensation in the soles.
9. Increased Blood Sugar levels.
10. Presence of Urine Sugar.
11. Positive Family History.

Exclusion Criteria:

1. Early onset of Diabetes Mellitus (Juvenial DM, IDDM).
2. Latrogenic Diabetes – Corticosteriods and Thiazide diuretics
3. Patients having hyperglycaemia due to hormonal disorder like Acromegaly, Cushing's Syndrome, Hyper thyroidism etc.
4. Patients having diabetes with coronary Heart disease and dehydrated with dry skin.
5. Patients with clinical or laboratory evidence of pre existing hepatobiliary disease, chronic active hepatitis, HBV infection, Cholecystitis and Gall Stone disease.
6. Pancreatic Diabetes – Pancreatic Carcinoma, Haemochromatosis, Diabetic Keto Acidosis.

Clinical Pathological Examination:

Blood Test:

- HbA_1C
- Fasting blood sugar.
- Post prandial blood sugar.
- Urea
- Serum cholesterol
- WBC/TC, DC
- ESC
- Hb were done.

Urine Analysis:

- Albumin
- Sugar Fasting and Post prandial
- Deposits.

Drug:

The Patients were orally administered Kandhaga parpam 100 mg with luke warm water twice a day after meals.

Pattern of Study:

Bio – Chemical analysis of blood sugar (fasting and post prandial) and carried out before and after treatment. In the case of out-patients urine sugar (Post Prandial) were estimated every week and fasting and post prandial Blood sugar estimation was done on every month. In case of In-patients urine sugar was done on every 5 days. Patients were strictly instructed to follow the below instructions given.

1. Not to take any other anti-diabetic drug of any other system whether in indigenous or modern, when they are on trial.
2. Incidental ailments are treated with appropriate Siddha Medicine.
3. Advised to attend Out patients department every week for the collection of Medicine. Urine examination and Blood Sugar estimation for every fifteen days.

4. Advised to follow the diabetic regimen given to them on registration under this clinical trial.

Tabulation showing Age wise percentage

S. No.	Age wise	No.of Patients	Percentage
1.	41-60 years	28	70%
2.	61-80 years	12	30%
	Total	**40**	**100%**

Gender distribution:

Gender	No. of Cases	Percentage
Male	19	47.5%
Female	21	52.5%
Total	40	100%

DIABETIC DIETERIC REGIMEN

மாறுபாடு இல்லா உண்டி மருந்துண்ணில்

ஊறுபாடு இல்லை உயிர்க்கு – திருக்குறள்

உணவே மருந்து மருந்தே உணவு:

- Obese diabetics are to be given a reducing diet. On the other hand lean and their diabetics should receive a weight gaining diet.
- In case of mild diabetics with obesity, diet control alone is required.
- Ideal caloric requirement is 20 calories per kg of body weight.
- Protein requirement is 1gm – 1.5 gm/per kg of body weight for adults, 2gm - 3gm per kg at body weight for children.
- Carbohydrate requirement is 2 gm of body weight to prevent ketoacidosis.
- In practice 40% of the total caloric should come from carbohydrate.
- Regarding fat is better to prescribe unsaturated fat to keep the cholesterol level under control.
- For sweetening agent patient may use sorbital fructose in the diet.
- Many patients require between 1800-2500 kilo calories wherelse aged women require a little less than this.

The regulated diabetic dieteric regimen is always essential for any form of anti-diabetic therapy. Whether it be oral drugs or parental Insulin and even in allopathy, ayurvedic, Siddha or other branches of Medicine.

Diet Schedule

அதிகாலை:

சர்க்கரையில்லாத தேநீர் - 1 கப்(அ)

சர்க்கரையில்லாத காபி – 1 கப்(அ)

சர்க்கரையில்லாத மல்லி தேநீர் – 1கப்

காலை உணவு:

கேழ்வரகு உப்புமா - 1கப்(அ)

கோதுமை அடை - 2

பச்சைக் காய்கறி சூப் - 1கப்

முளைவிட்ட தானிய வகை - 1கப்

பழச்சாறு/கீரைச்சாறு - 1கப்

இரண்டு மணி நேரம் கழித்து 11.00 மணியளவில் சிக்கன் சூப், கீரை சூப், காய்கறி சூப், மோர், எலுமிச்சம்பழச்சாறு, நெல்லிக்காய் சாறு இவைகளில் ஏதாவதொன்றை 100மி.லி. அருந்தலாம்.

மதிய உணவு:

சமைத்த காய்கறி - 2கப்

சமைத்த கீரை - 1கப்

புழுங்கலரிசி / சம்பா அரிசி -1கப் (அ)

கோதுமை சாதம் - 1கப்

மாலை உணவு:

முளை விட்ட தானிய வகை – 1கப்

வெங்காயம் நறுக்கியது – 1கப்

சீரகத்தூள் - தேவையான அளவு உப்பு சேர்த்து கொள்ளலாம்.

காய்கறி சூப் - 1கப்

இரவு உணவு:

கோதுமை தோசை – 2(அ)

சப்பாத்தி - 2(அ)

கேழ்வரகு தோசை - 2கப்(அ)

கோதுமை உப்புமா - 2கப்

இவற்றில் ஏதாவது ஒன்றை 7.30 மணிக்கு சாப்பிட வேண்டும்.

சில குறிப்புகள்:

1. சமச்சீரான உணவு வகைகளை உட்கொள்ள வேண்டும்.
2. சமையலுக்கு நல்லெண்ணெய் அல்லது சூரியகாந்தி எண்ணெய் மட்டும் உபயோகிக்கவும்.
3. தண்ணீர் அதிகமாக குடிக்க வேண்டும். புளிப்பு வகை உணவு, தயிர் தவிர்க்கவும்.
4. உயர் ரத்த அழுத்தம், இருதய நோய், சிறுநீரக பாதிப்பு இருந்தால் உப்பைக் குறைக்கவும்.
5. மாலையில் சுமார் 2கி.மீ. மித வேகமாக நடக்கவும்.
6. காலை, மாலை தியானம் செய்யவும்.

உணவில் சேர்க்க வேண்டிய காய்கறிகள்:

கசப்பு, துவர்ப்பு சுவையுள்ள காய்கறிகள் நலம். பாகல்பிஞ்சு, புடலங்காய், வெண்டைக்காய், சௌசௌ, காலிபிளவர், கத்தரி, வாழைத்தண்டு, வெள்ளரிக்காய், தர்பூசணி, கேரட், முட்டைக்கோஸ், சுண்டவற்றல் இவற்றை சேர்த்துக் கொள்ளவும்.

உணவில் சோக்க வேண்டிய கீரை வகைகள்:

பொதுவாக எல்லாக் கீரை வகைகளையும் சேர்த்துக் கொள்ளவும். முக்கியமாக முருங்கைக்கீரை, பொன்னாங்கண்ணி, பசலைக்கீரை, மணத்தக்காளி கீரை இவற்றை உண்ணலாம்.

உணவில் பூண்டு, வெங்காயம், மஞ்சள், கடுகு, ஏலம், வெந்தயம், சீரகம், வாழைப்பூ, கறிவேப்பிலை, மல்லி, காயம், இவைகளை சேர்த்துக் கொள்ள வேண்டும்.

Regimen for Madhumegam Patients:

Primary Prevention

1. Maintenance at normal body weight.
2. Healthy nutritional practice.
3. Regular physical exercise such as brisk walking, jogging etc.
4. Avoiding alcohol and Smoking.
5. Periodic health check-up.

Secondary Prevention:

It means control of Madhumegam and its complications. It is possible by maintaining.

1. Normal blood glucose levels.
2. Ideal body weight and blood pressure.

3. Normal blood cholesterol and fats.

All diabetic persons should regularly undergo their blood glucose examination, Kidney function test, eye checkup and foot examination.

Diet and Diabetes:

- 30% of the disease can be controlled with proper diet.
- Proper diet is vital in the treatment of diabetes.
- Diet for a Madhumegam person need not to be completely different from a non – diabetic person.'

Foods that should be avoided:

- sugar in any form (Sweets, Ice creams, Chocolates, Candies etc)
- High Carbohydrate foods like potatoes, sweets, carrot, beetroot etc.
- Fried items like puri and fat items.
- Fruits high in sugar content like banana, sapota, grapes, mango etc.

Help of Exercise in Madhumegam

- Lowers blood glucose level quickly.
- Improves the body's ability to use insulin.
- Reduces insulin requirement.
- Reduces the risk at heart diseases.

Yoga Treatment in Madhumegam

- Dhanur Aasanam
- Pujanga Aasanam
- Chakara Aasanam
- Eaha Padma Aasanam
- Mayurasanam

- Mathsaya Aasanam
- Padmasanam
- Sarvangasanam
- Villasanam
- Patchi Mothosanam

All these aasanas should be practiced daily and regularly which can be at immense value to patients of Madhumegam. All these Aasanas activate the pancreatic cells and have a curative value.

நீரிழிவு நோயாளிகள் உண்ணக் கூடாத உணவுகள்:

மேகவாகடந்திரட்டுவிலிருந்து (ப.எண்.4)

பாலா காஆ காநெய்யும்
பருகா காகா பவையர்தன்
மாலா காகா மீனிறைச்சி
வாகா காகா மெலப்பருக்கும்
மருந்தே, மருகில் மடைபோல
வருநீர், பருகி, விடுமயர்ந்து,

கொள்ளு, காடி, குமட்டிக்காய்
கோழி, பன்றி, வெள்ளாடு
முள்ளுவப்பெரிய பாகற்காய்
முழுதும் நல்ல பூசணிக்காய்
கிள்ளுக்கீரை, அரைக்கீரை
கிடங்கிற், படரும், செம்புடனே
எள்ளத் தனையும் திண்டீரேல்

BIO STATISTICAL ANALYSIS

Drug

Kandhaga parpam– Madhumegam.

Description of the clinical trials

The clinical trials were described according to their age and gender.

Table – 1

Gender wise percentage distribution of ages.

Age Group (Years)	Male		Female		Total	
	No	%	No	%	No	%
41-60	12	30	15	37.5	27	67.5
61-80	7	17.5	6	15	13	32.5
Total	**19**	**47.5**	**21**	**52.5**	**40**	**100.0**

The above table – 1 describes the gender wise age distribution with percentage of the group. The male participation of the study was 47.5% and the female participation of the study was 52.5%.

Table – 2

Comparison of male and female according to their age composition.

Sex	**Age (years)**		**Difference of Means**	**d.f**	**Significance**
	Mean	**S.D.**			
Male	59.2	13.2	2.7	36	p>0.05
Female	56.5	7.2			

The above comparison in respect of age between the male and female shown in the above table – 2 reveals that the mean age of males was 59.2± 13.2 years and the name of the female was 56.5±7.2 years. The age difference in between the means was 2.7 years and the same was not statistically significant(p>0.05).

Assessment of Blood Glucose Level:

The blood glucose levels of the study samples were assessed in two occasions viz fasting and post prandial between the before and after treatments follows.

Table – 3

Assessment of Blood Glucose Level before and after treatment

Blood Glucose Level (mg/dl)	Fasting				Post Prandial			
	Before		After		Before		After	
	No	%	No	%	No	%	No	%
70-110	3	7.5	22	55	-	-	-	-
110-140	8	20	12	30	-	-	5	12.5
140 and above	29	72.5	6	15.0	40	100.0	35	87.5
Total	**40**	**100.0**	**40**	**100.0**	**40**	**100.0**	**40**	**100.0**

The flood glucose levels of study subjects were assessed in the above table-3 The fasting glucose level before treatment above the normal was 37 (92.7%) patients. Almost all the patients were above normal. After treatment, among the 40 patients, 22 (55%) had normal blood glucose level (70-110mg/dl). The remaining 18 (45%) patients had above the normal of 110 mg / dl and above. Regarding the post prandial blood glucose level, all the patients, blood glucose levels were above normal (above 140mg/dl) before treatment. After treatment among the 40 patients,5 (12.5%) had normal blood glucose level (110-140 mg/dl). The remaining patients 35(87.5%) their blood glucose level above the normal 140 mg/ dl.

Response of the drug:-

By considering all and other factors, which were responsible but managing the madhumegam, the response of the drug was graded as good, fair and poor as follows.

Table – 5

Response of the drug

Sl. No.	**Response**	**No. of Persons**	**Percentage**
1	Good	14	35.0%
2	Fair	23	57.5%
3	Poor	3	7.5%
	Total	**40**	**100.0%**

The table – 5 shows the response of the drugs. Among the 40 patients, 14 (35%) patients had good response. The remains 23 (57.5%) and 3(7.5%) had fair and poor response respectively. The good response was the reduction of fasting and post prandial blood glucose level to the normal after treatment.

The clinical trials were19(47%) of males and 21(52.5%)females. In respect of their age they were not statistically significantly dirrerenced ($p>0.05$). That mean both genders were equal in respect of their age.

After the treatment 60% of the subjects had attained normal glucose level of fasting and 17.2% of then had attained the normal level of post prandial. However, the drug was effective in reduction of the level of blood glucose level from the before treatment of after treatment. There was not significant reductions of the weights were observed. The good response of the drug was only 35% and poor response was 7.5%. The fair response was 57.5%.

DISCUSSION

The literature evidence from the text Pharmacopoeia of siddha research supports the Hypoglycaemic activity of the drug.

The drug Kandhaga parpam was selected to find its efficacy in management of Madhumegam(Diabetes mellitus).

ICP study on the drug Kandhaga parpam reveals the presence of cooper,iron,sulphur,zinc,cobalt.SEM and FTIR shows the size of the particles and peak values present in the kandhaga parpam.

Bio chemical analysis of the drug Kandhaga parpam reveals the presence of sulphate, calcium, chloride.

Sulphate

Basically Sulphur is also a component of insulin.

Zinc is also a component of insulin.

Acute oral toxicity study:

Kandhaga parpam at the dose of 2000mg/kg/po, respectively did not exhibit any mortality in rats.

Pharmacological study:

The study shows a significant action for hypoglycaemic activity.

Clinical study:

Among the 40 cases treated 47.5% patients were male and 52.5% were female. The percentage is more in the case of female.

Among the 40 cases treated 28 cases(70%) belonged to 41 -60 years, 12 cases (30%) belonged to 61-80 years.

Sulphur, after calcium and phosphorus, is the most abundant mineral element found in our body. It is available to us in our diets, derived almost exclusively from proteins, and yet only 2 of the 20 amino acids normally present in proteins contains sulphur. One of these amino acids, methionine, cannot be synthesized by our bodies and therefore has to be supplied by the diet. Cysteine, another sulphur containing amino acid, and a large number of key metabolic intermediates essential for life, are synthesized by us, but the process requires a steady supply of sulphur.

Summary

The literary evidence strongly supports the hypoglycaemic activity of Kandhaga parpam in the management of madhumegam (Diabetes mellitus).

The drug Kandhaga parpam has been selected for this study to evaluate its efficacy in the management of madhumegam.

Chemical analysis of the drug reveals the presence of sulphate, calcium, chloride

ICP study on the drug Kandhaga parpam shows the presence of sulphur, iron, copper, zinc, cobalt, bismuth.

The acute toxicity study shows that the drug is safe up to dose level of 2000mg/kg/po.

The pharmacological study shows that the drug has significant hypoglycaemic activity at the dose of 20mg /kg/po.

Conclusion

The literature evidence, toxicological studies, pharmacological studies, and based on the observation of the clinical studies shows the drug Kandhaga parpam has Hypoglycaemic activity. It is concluded that the Kandhaga parpam can be used in the management of Madhumegam(Diabetes mellitus)

Bibliography

- Neerilivu maruthuvam, Dr.Abdula sayubu – P.g -1
- Indian Materia medica – Nadkarni
- Indian Medical plants vol—Arya vaidya sala
- Medicinal plants – Moshraffudin Ahmed
- The Wealth of India – Vol:9
- Indian Folk medicines and other plant based products
- Minerals of india – Mether – D.N.Wadia
- In organic, pharmaceutical and medicinal chemistry
- The wealth of Alchemy its medicinal uses – B.Mukherji
- Text book of medicine – P.C.Das
- Agastriyar Gunavagadam
- Agastriyar – 1200
- Agastriyar – 2000
- Anuboga vaithiya dega ragasiyam
- Anuboga vaithiya navaneedham - part -6 – Dr.Abdula Sayubu
- Paartha Guna Vilakam – Thathu – Jeeva, Vaguppu – Dr.R.Thiayagarajan, Pub –Indian medicine and homeopathy
- Gunapadam Mooligai Vaguppu –Ka.Sa.Murugesa mudhaliyar, pub on 2001 by Indian medicine and homeopathy
- Siddha maruthuva noi naadal, noi mudhal naadal – Part –I – Dr.M.Shanmugavelu – Pub by Indian medicine and homeopathy
- Noi illa Neri – pub by Indian medicine and homeopathy
- Kannusamy parambarai vaithiyam
- Bible mooligaigal

- Sanga illakiya thavarangal
- Pancha kaviya nigandu
- Yugi vaithiya sindhamani
- Therayar thaila vargam
- Therayar yamaga venba
- Siddha maruthuvanga surukkam, pub by Indian medicine and homeopathy
- Pharmacopoeia of siddha research
- T.V.Sambasivam Pillai Dictionary
- Neerilivu Maruthuvam –H.M.Abdula sayubu
- Eliya vaithiya murai-300

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SCREENING COMMITTEE

Candidate Reg No:32101506

This is to certify that the dissertation topics ***Hypolipidemic activity*** of the single drug **NAANAL KARUMBU CHOORANAM**, and Hypoglycaemic activity of the compound drug **KANDHAGA PARPAM** have been approved by the screening committee.

S.No	Name	Signature
1.	Pro. Dr. N. CHANDRAMOHAN DOSS, MD (S) Principal & Chairman	
2.	Pro. Dr. R. THANGAMONEY, MD (S)	
3.	Dr. A. SUBRAMANIAN, MD (S)	

(Kindly make sure that the minutes of the meeting duly signed by all the participation are maintained by the college office)

OP/IP PATIENTS INVESTIGATION REPORT-LIPID PROFILE

S.No	OP/IP.No	Name	Age/sex	T.Choles		HDL		LDL		VLDL		TGL	
				BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1.	44702	Vannian	60/M	230	180	46	50	170	132	21	16	72	68
2.	44703	Veera Lakshmi	50/F	240	231	40	41	181	10	90	20	97	98
3.	45675	Selvi	47/F	293	282	50	52	162	148	17	23	186	165
4.	45760	Selvi	40/F	290	268	38	42	185	182	20	24	181	149
5.	46475	Jatter sadik	68/M	283	185	43	41	172	128	35	17	240	158
6.	47893	Athiyammal	60/F	304	289	56	66	179	198	69	25	301	268
7.	49846	Jeeva vadivel	72/M	268	243	47	54	169	104	20	24	100	120
8.	49847	Kalyani	65/F	248	212	40	52	110	100	34	38	390	180
9.	49802	Bala murugan	40/M	238	202	42	42	157	135	38	30	190	149
10.	50247	Aesha	46/F	272	246	36	40	110	103	64	36	181	148
11.	53083	Velsamy	62/M	243	228	54	58	171	119	28	18	140	98
12.	55964	Gandhimathy	38/F	251	196	54	52	117	78	47	32	234	160
13.	55965	Sailappan	42/M	287	258	39	42	215	187	28	18	240	158
14.	58666	Uchimagalai	65/F	238	212	29	32	148	142	39	28	280	234
15.	60514	Bakiam	62/F	295	218	40	45	216	153	19	17	215	205
16.	61002	Avudaiappan	37/M	262	248	48	48	162	17	20	21	310	302
17.	62940	Jeya Raj	67/M	282	222	38	48	190	131	39	37	194	188
18.	64579	Manoharan	50/M	275	253	47	54	166	85	19	20	349	128
19.	75324	Kannan	38/M	261	228	46	40	151	65	64	36	313	267
20.	76016	Murugan	50/M	248	216	36	38	191	186	67	67	241	228

21.	77580	Kaliammal	40/F	276	270	42	40	168	162	29	19	272	235
22.	81457	Sathya	45/F	287	232	54	58	191	98	38	34	192	174
23.	82417	Meenachi	50/F	311	262	41	44	92	88	69	25	361	238
24.	82413	Sundaram	56/M	271	202	42	51	93	97	78	43	190	149
25.	84754	Prabhu	47/M	290	248	44	48	246	201	64	36	269	192
26.	88361	Shenbagam	51/F	265	212	35	36	174	186	48	32	199	167
27.	88362	Vasantham	47/F	253	238	46	48	93	97	89	36	192	174
28.	89013	Gopal	50/M	247	228	42	45	116	102	49	37	162	153
29.	93040	Pandiselvi	48/F	238	202	33	41	104	67	47	32	259	200
30.	93038	Kasi	62/F	252	227	38	36	163	139	51	40	157	104
31.	93039	Muthu	57/M	236	218	48	46	191	98	72	46	321	267
32.	46737	Kannapan	38/M	242	215	42	42	163	145	40	31	212	202
33.	51309	Vanniyam	50/M	269	228	35	38	198	152	35	32	175	172
34.	53961	Vanniya Raj	52/M	293	28	28	32	179	146	51	42	258	181
35.	2589	Selvi	40/F	277	245	26	31	132	125	65	52	232	175
36.	2685	Pappa	57/F	310	257	36	39	198	142	61	39	327	281
37.	65442	Varadha Rajan	80/M	286	237	46	42	182	167	29	35	305	257
38.	2868	Maya Kannan	38/M	280	212	45	47	163	148	35	25	254	201
39.	3547	Iyappan	40/M	222	202	20	28	167	132	40	36	210	26
40.	3783	Samy	48/M	225	210	38	39	155	138	35	38	312	275

OP/IP PATIENTS INVESTIGATION REPORT-HEAMATOLOGY																						
S.No	OP/IP.No	Name	Hb		Tc		Dc				DC				ESR				T.RBC		Sugar	
			BT	AT	BT	AT	BT				AT				BT		AT		BT	AT		
							P	L	E	M	P	L	E	M	½ hr	1hr	½	1hr				
1.	44702	Vannian	13.2	13.4	8900	8500	60	44	6	0	60	30	5	0	10	20	5	10	4.1	3.5	75R	81F
2.	44703	Veera Lakshmi	12.6	13.1	8500	8600	57	41	3	0	58	45	2	0	5	10	7	10	4.5	4.8	84R	90R
3.	45675	Selvi	11	7.2	7600	7200	50	46	1	0	51	47	2	0	8	12	8	10	3.6	2.4	75F	110 R
4.	45760	Selvi	11.6	12.3	8800	8200	60	30	8	2	66	33	1	0	4	8	10	20	3.2	4	84F	98R
5.	46475	Jatter sadik	12.6	10.9	8100	7600	56	39	4	1	65	29	3	0	5	0	16	0	3.8	4.2	88R	9R
6.	47893	Athiyammal	8.7	10.8	6200	7000	54	38	2	0	61	33	2	0	12	21	10	20	3.2	3.8	79R	90R
7.	49846	Jeeva vadivel	10.6	10.8	7200	7200	52	40	6	1	60	38	1	1	8	16	30	60	3.3	3.8	104F	87F
8.	49847	Kalyani	14.2	13.9	7900	7900	56	42	2	3	52	39	4	1	4	2	4	10	4.1	3.7	102 R	116 R
9.	49802	Bala murugan	12.3	12.8	8900	8400	67	28	3	1	49	46	1	0	8	2	4	12	5	4.2	81F	76R
10.	50247	Aesha	11.9	12.4	8200	8600	56	42	2	0	52	44	4	0	6	12	10	20	4.1	3.7	140F	117 R

11.	53083	Velsamy	13	12.8	8300	8600	62	36	1	0	60	38	3	0	2	4	8	12	3.5	3.4	94R	100F
12.	55964	Gandhimathy	10.2	13.1	8100	8700	63	34	3	0	50	46	4	0	6	12	6	12	3.6	3.1	280R	110F
13.	55965	Sailappan	11.1	12.2	8000	8900	65	47	1	0	62	46	3	0	2	4	4	6	4.3	4.5	86F	92F
14.	58666	Uchimagalai	12.8	13.2	8300	8600	47	43	7	1	53	46	2	1	4	8	4	8	3.6	3.7	193R	162R
15.	60514	Bakiam	11.9	11.2	6800	7200	52	40	1	0	60	30	4	0	4	8	2	4	4	3.2	127F	103F
16.	61002	Avudaiappan	12.3	12.8	8100	9600	67	33	3	0	62	49	1	0	12	24	10	20	3	3.7	104F	87F
17.	62940	Jeya Raj	10	15.2	7000	7300	49	47	4	0	50	46	4	0	2	4	2	4	4.8	4.9	86F	92F
18.	64579	Manoharan	13	10.6	8800	9200	57	36	3	0	60	38	2	1	2	4	2	4	4.3	4.2	167F	123F
19.	75324	Kannan	12.3	13.2	7800	9100	54	39	2	0	56	42	1	0	4	8	2	4	5.1	4.5	198R	123R
20.	76016	Murugan	14	14.2	9100	9300	63	48	1	0	62	48	2	0	6	12	4	8	3.8	4.2	90R	98R
21.	77580	Kaliammal	8.6	9.1	8600	9600	62	38	1	0	67	30	3	0	4	8	4	8	4.1	3.5	84F	95F
22.	81457	Sathya	9.8	12.1	9700	9300	57	42	1	0	58	47	1	0	2	4	2	8	5.1	4.9	172R	133R
23.	82417	Meenachi	10.2	12.3	8300	8600	61	38	3	0	54	47	1	0	12	14	16	18	3.2	4	11R	120R
24.	82413	Sundaram	11.5	12.8	9100	9300	58	41	2	0	61	23	2	0	6	8	10	12	4.2	3.6	184R	175R
25.	84754	Prabhu	11.2	10.9	8300	8700	56	42	3	0	59	40	1	0	2	0	2	4	4.7	4.8	123F	120F

26.	88361	Shenbagam	12.1	14.1	9100	8700	55	47	2	2	58	44	1	0	5	7	10	12	3	3.4	90R	95R
27.	88362	Vasantham	10.1	11.5	8400	8600	61	41	1	0	52	46	2	0	12	24	10	28	4.8	4.9	110R	102R
28.	89013	Gopal	9.7	12	7400	8200	62	34	3	0	56	40	2	1	14	28	6	12	3.2	4	82R	93R
29.	93040	Pandiselvi	13	9.6	8300	7000	52	40	1	0	52	40	8	0	8	16	12	24	3.6	4	184R	172R
30.	93038	Kasi	12.8	13.2	7900	7900	67	28	3	0	58	39	4	0	4	8	2	4	3.1	3.4	127R	90R
31.	93039	Muthu	10	15.2	7000	7200	49	47	4	0	50	40	4	0	16	28	6	12	3.6	2.1	82F	76F
32.	46737	Kannapan	10.6	10.8	7200	7600	53	45	2	0	54	42	4	0	28	46	4	2	3.3	4.2	130R	126R
33.	51309	Vanniyam	11.9	11.2	8200	7000	52	40	8	0	52	44	4	0	2	4	2	4	3.2	3.1	102R	116R
34.	53961	Vanniya Raj	10.6	10.9	9600	7800	62	36	1	0	52	46	2	0	4	8	4	8	3	3.4	79R	90F
35.	2589	Selvi	12.8	11	8200	8900	60	44	6	0	67	30	3	0	2	4	2	8	4.1	3.5	75R	81F
36.	2685	Pappa	10.4	11.2	8800	8200	60	30	8	0	63	34	3	0	16	32	8	16	3.8	3.9	86F	91R
37.	65442	Varadha Rajan	12.3	12.8	6700	8200	54	42	4	0	56	40	1	1	4	8	2	4	4.8	4.9	132F	128F
38.	2868	Maya Kannan	10.7	12.2	7600	8400	55	43	1	0	60	38	1	1	10	20	5	10	3.7	3.9	213R	170R
39.	3547	Iyappan	9.5	10.4	8100	8300	65	41	3	0	57	42	1	1	1	4	2	8	4.1	4.5	110R	90R
40.	3783	Samy	14.2	13.9	8900	8800	67	28	3	-	56	39	4	0	6	8	12	4	3.2	3.5	102R	116R

OP/IP PATIENTS INVESTIGATION RESULTS-LIVER FUNCTION TEST															
S.No	OP/IP No	Name	Age/Sex	T.B		D.B		I.B		SGOT		SGPT		ALK.P	
				BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1.	44702	Vannian	60/M	0.7	0.5	0.4	0.3	0.3	0.2	28	15	13	19	262	142
2.	44703	Veera Lakshmi	50/F	0.5	0.8	0.3	0.3	0.2	0.5	34	37	37	32	184	190
3.	45675	Selvi	47/F	0.6	1.0	0.4	0.4	0.2	0.2	21	26	18	22	239	265
4.	45760	Selvi	40/F	0.9	1.0	0.5	0.6	0.4	0.4	52	66	46	19	-	322
5.	46475	Jatter sadik	68/M	1.2	1.0	0.7	0.5	0.4	0.5	08	20	10	35	210	142
6.	47893	Athiyammal	60/F	0.7	0.7	0.9	0.2	0.3	0.5	24	24	19	19	176	172
7.	49846	Jeeva vadivel	72/M	0.8	0.7	0.4	0.4	0.4	0.6	14	18	24	24	184	190
8.	49847	Kalyani	65/F	1.0	0.5	0.6	0.3	0.4	0.2	36	26	17	21	289	243
9.	49802	Bala murugan	40/M	0.8	0.6	0.4	0.2	0.5	0.2	21	26	22	19	23	145
10.	50247	Aesha	46/F	0.5	0.8	0. 3	0.3	0.2	0.2	27	28	36	34	214	212
11.	53083	Velsamy	62/M	0.5	0.5	0.3	0.2	0.2	0.5	27	33	41	36	247	224
12.	55964	Gandhimathy	38/F	0.7	1.0	0.5	0.6	0.2	0.6	24	26	18	22	239	265
13.	55965	Sailappan	42/M	1.2	1.0	0.7	0.7	0.5	0.5	08	20	10	35	324	286
14.	58666	Uchimagalai	65/F	0.6	0.6	0.3	0.6	0.3	0.2	29	29	20	20	155	176
15.	60514	Bakiam	62/F	1.0	0.5	0.6	0.3	0.4	0.2	49	32	39	22	112	148

16.	61002	Avudaiappan	37/M	0.3	0.7	0.2	0.4	0.5	0.3	12	15	12	28	168	150
17.	62940	Jeya Raj	67/M	0.8	1.2	0.4	0.3	0.4	0.3	30	22	13	19	262	142
18.	64579	Manoharan	50/M	0.7	0.6	0.2	0.4	0.4	0.1	17	22	22	30	312	234
19.	75324	Kannan	38/M	0.5	0.5	0.3	0.2	0.3	0.5	31	86	26	17	176	211
20.	76016	Murugan	50/M	0.6	0.2	0.5	0.6	0.4	0.2	27	15	12	24	321	287
21.	77580	Kaliammal	40/F	1.0	0.5	0.6	0.3	0.4	0.2	36	25	17	21	289	243
22.	81457	Sathya	45/F	0.6	0.7	0.4	0.4	0.2	0.2	21	26	18	22	239	265
23.	82417	Meenachi	50/F	0.8	1.0	0.5	0.9	0.3	0.1	24	22	18	17	210	142
24.	82413	Sundaram	56/M	0.8	0.7	0.4	0.4	0.4	0.4	27	28	36	38	214	212
25.	84754	Prabhu	47/M	0.3	0.2	0.4	0.2	0.6	0.3	23	21	22	18	98	112
26.	88361	Shenbagam	51/F	0.7	0.8	0.2	0.3	0.5	0.6	40	18	19	21	194	190
27.	88362	Vasantham	47/F	0. 8	0.7	0.4	0.5	0.6	0.7	27	28	36	34	16	180
28.	89013	Gopal	50/M	0.5	0.5	0.2	0.3	0.2	0.4	27	41	33	36	210	142
29.	93040	Pandiselvi	48/F	0.2	0.4	0.5	0.7	0.6	0.3	11	12	12	40	133	124
30.	93038	Kasi	62/F	0.8	0.5	0.3	0.2	0.5	0.2	17	22	30	42	17	193

31.	93039	Muthu	57/M	0.3	0.2	0.4	0.3	0.6	0.3	29	29	13	19	270	26
32.	46737	Kannapan	38/M	0.9	1.0	0.5	0.6	0.4	0.4	32	66	46	90	-	345
33.	51309	Vanniyam	50/M	1.0	0.8	0.6	0.5	0.2	0.3	14	22	11	36	158	182
34.	53961	Vanniya Raj	52/M	0.6	0.6	0.3	0.3	0.2	0.6	12	13	21	20	212	220
35.	2589	Selvi	40/F	0.8	0.1	0.3	0.6	0.2	0.4	21	17	30	26	112	120
36.	2685	Pappa	57/F	1.2	1.0	0.7	0.5	0.5	0.5	8	20	10	35	17	172
37.	65442	Varadha Rajan	80/M	0.9	0.7	0.4	0.3	0.3	0.2	27	28	12	17	247	224
38.	2868	Maya Kannan	38/M	0.2	0.4	0.3	0.5	0.6	0.2	17	20	14	31	147	136
39.	3547	Iyappan	40/M	0.6	0.7	0.2	0.3	0.4	0.4	14	18	10	25	377	342
40.	3783	Samy	48/M	0.8	1.2	0.5	0.5	0.4	0.3	28	15	13	19	258	194

T.B = Total bilirubin D.B-Direct bilirubin I.B-Indirect bilirubin BT-Before treatment AT-After treatment

OP/IP PATIENTS INVESTIGATION RESULTS-RENAL/LIVER FUNCTION TEST														
S.No	OP/IP No	Name	Urea		Creatinine		T.Protine		Albumin		Globulin		Uric acid	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1.	44702	Vannian	22	19	0.7	0.6	7.8	7.5	4.5	4.4	3.3	3.1	3.6	2.9
2.	44703	Veera Lakshmi	26	28	0.8	0.9	6.8	6.4	4.2	4.4	3.2	3.0	4.2	4.8
3.	45675	Selvi	26	18	0.6	0.8	7.9	8.2	4.0	4.2	3.4	3.4	3.9	4.5
4.	45760	Selvi	32	19	0.7	0.7	7.8	8.1	5.0	7.5	3.1	2.5	5.2	4.8
5.	46475	Jatter sadik	20	23	0.8	0.6	7.9	7.5	4.5	4.3	3.3	3.5	7.2	2.7
6.	47893	Athiyammal	21	25	0.9	0.9	7.2	7.4	4.2	4.4	3.0	3.0	4.8	4.9
7.	49846	Jeeva vadivel	15	18	0.6	0.6	7.6	7.0	4.2	4.0	3.3	2.2	3.4	3.2
8.	49847	Kalyani	19	24	0.7	0.8	6.4	6.8	4.4	4.2	4.1	2.5	7.5	3.6
9.	49802	Bala murugan	32	27	0.3	0.5	7.5	6.2	4.4	4.1	3.2	3.5	4.3	4.2
10.	50247	Aesha	27	18	0.8	0.6	7.7	7.5	4.6	4.5	3.1	3.2	6.6	6.8
11.	53083	Velsamy	25	28	0.7	0.6	7.2	6.9	4.3	4.2	3.0	3.0	2.7	2.8
12.	55964	Gandhimathy	19	25	0.5	0.7	6.4	6.8	4.3	4.7	4.1	2.5	4.7	4.2
13.	55965	Sailappan	19	27	0.7	0.8	7.5	8.0	4.2	5.8	3.3	2.2	3.4	4.2
14.	58666	Uchimagalai	22	19	0.7	0.6	7.9	7.9	4.6	4.5	3.1	2.4	5.2	3.9
15.	60514	Bakiam	27	26	0.9	0.9	7.3	9.0	4.2	6.5	3.2	3.4	2.7	2.8

16.	61002	Avudaiappan	25	27	0.5	0.5	7.2	6.5	4.1	2.1	3.3	3.5	4.2	4.8
17.	62940	Jeya Raj	42	24	1.0	0.7	7.8	9.2	4.5	5.6	3.3	2.6	5.0	3.0
18.	64579	Manoharan	24	28	0.7	0.6	8.2	7.0	4.1	4.5	3.5	2.5	2.6	2.6
19.	75324	Kannan	27	26	0.5	0.7	7.6	7.4	4.2	4.4	3.3	3.0	4.8	4.9
20.	76016	Murugan	21	23	0.6	0.4	6.8	6.1	3.2	4.8	2.5	3.6	2.7	3.2
21.	77580	Kaliammal	22	20	0.7	0.9	7.5	7.7	4.4	4.5	3.1	3.5	4.5	6.8
22.	81457	Sathya	19	36	0.6	0.5	8.2	7.6	4.5	4.6	3.2	2.5	2.7	6.8
23.	82417	Meenachi	21	16	0.7	0.3	7.3	7.6	4.4	4.8	2.6	2.4	5.3	2.9
24.	82413	Sundaram	27	34	0.7	0.5	7.2	7.8	4.7	4.8	3.1	3.0	4.2	4.5
25.	84754	Prabhu	33	21	1.0	0.7	7.8	7.9	4.5	4.0	3.2	3.6	7.2	2.6
26.	88361	Shenbagam	26	28	0.8	0.9	6.8	6.4	4.5	5.6	4.1	2.4	6.0	5.8
27.	88362	Vasantham	25	27	0.9	0.7	6.4	6.8	4.4	4.2	3.2	3.0	5.2	5.2
28.	89013	Gopal	21	26	0.7	0.8	7.2	7.4	4.2	4.8	3.5	2.1	6.0	5.2
29.	93040	Pandiselvi	42	24	1.0	0.7	7.8	9.2	4.4	5.6	3.3	3.9	3.9	4.5
30.	93038	Kasi	27	34	0.5	0.6	7.0	7.4	7.6	4.7	3.5	2.1	4.7	4.2

31.	93039	Muthu	19	27	0.6	0.5	7.6	7.0	4.3	4.0	3.2	3.0	2.7	4.9
32.	46737	Kannapan	18	21	0.4	0.9	7.2	7.5	3.1	3.5	2.2	2.4	4.8	4.8
33.	51309	Vanniyam	15	18	0.5	0.4	6.4	6.2	4.2	4.4	3.3	2.0	2.7	4.9
34.	53961	Vanniya Raj	25	27	0.6	0.5	6.2	6.8	3.6	3.4	3.5	3.2	4.7	4.2
35.	2589	Selvi	42	24	1.0	0.7	7.8	9.2	4.5	9.2	4.5	4.0	2.8	3.8
36.	2685	Pappa	15	18	0.5	0.6	7.2	7.4	4.4	4.2	3.0	3.2	2.7	4.1
37.	65442	Varadha Rajan	27	26	0.3	0.7	6.8	6.4	4.2	4.8	4.2	3.5	5.2	5.2
38.	2868	Maya Kannan	36	24	0.6	0.5	6.4	7.5	8.2	5.6	4.1	2.8	6.0	5.6
39.	3547	Iyappan	25	28	0.7	0.4	7.3	7.2	7.9	7.7	4.2	3.3	2.6	2.6
40.	3783	Samy	17	19	0.9	0.6	7.2	7.6	4.7	4.2	3.3	3.2	3.4	3.2

OP/IP PATIENTS REPORT-WEIGHT CHART								
S.No	OP/IP No	Name	Age/Sex	Treatment started	Treatment ended	Weight		Height
						BT	AT	
1.	44702	Vannian	60/M	15.06.2012	25.07.2012	65kg	56kg	163cm.
2.	44703	Veera Lakshmi	50/F	15.06.2012	25.07.2012	66kg	60kg	172cm.
3.	45675	Selvi	47/F	19.06.2012	31.07.2012	53kg	54kg	165cm.
4.	45760	Selvi	40/F	19.06.2012	31.07.2012	83kg	85kg	158cm.
5.	46475	Jatter sadik	68/M	21.06.2012	31.07.2012	70kg	67kg	162cm.
6.	47893	Athiyammal	60/F	26.06.2012	05.08.2012	79kg	79kg	173cm.
7.	49846	Jeeva vadivel	72/M	03.07.2012	11.08.2012	64kg	64kg	153cm.
8.	49847	Kalyani	65/F	03.07.2012	13.08.2012	56kg	55kg	165cm.
9.	49802	Bala murugan	40/M	03. 07.2012	11.08.2012	68kg	66kg	162cm.
10.	50247	Aesha	46/F	04.07.2012	13.08.2012	65kg	65kg	164cm.
11.	53083	Velsamy	62/M	13. 07.2012	22.08.2012	79kg	80kg	155cm.
12.	55964	Gandhimathy	38/F	24. 07.2012	25.08.2012	64kg	63kg	150cm.
13.	55965	Sailappan	42/M	24. 07.2012	25.08.2012	73kg	71kg	156cm.

14.	58666	Uchimagalai	65/F	03.08.2012	09.09.2012	60kg	62kg	175cm.
15.	60514	Bakiam	62/F	08.08.2012	12.09.2012	63kg	60kg	162cm.
16.	61002	Avudaiappan	37/M	09.08.2012	14.09.2012	72kg	71kg	159cm.
17.	62940	Jeya Raj	67/M	16.08.2012	21.09.2012	84kg	82kg	163cm.
18.	64579	Manoharan	50/M	22.08.2012	26.09.2012	55kg	58kg	167cm.
19.	75324	Kannan	38/M	24.09.2012	29.10.2012	59kg	58kg	171cm.
20.	76016	Murugan	50/M	26.09.2012	24.10.2012	73kg	72kg	166cm.
21.	77580	Kaliammal	40/F	01.10.2012	5.11.2012	58kg	53kg	173cm.
22.	81457	Sathya	45/F	12.10.2012	16.11.2012	72kg	72kg	157cm.
23.	82417	Meenachi	50/F	16.10.2012	5.11.2012	65kg	63kg	152cm.
24.	82413	Sundaram	56/M	16.10.2012	5.11.2012	52Kg	52kg	155cm.
25.	84754	Prabhu	47/M	24.10.2012	28.11.2012	82kg	81kg	165cm.
26.	88361	Shenbagam	51/F	05.11.2012	09.12.2012	66kg	64kg	148cm.
27.	88362	Vasantham	47/F	05.11.2012	09.12.2012	59kg	62kg	158cm.
28.	89013	Gopal	50/M	06.11.2012	10.12.2012	58kg	58kg	165cm.
29.	93040	Pandiselvi	48/F	17.11.2012	22.12.2012	74kg	71kg	171cm.
30.	93038	Kasi	62/F	17.11.2012	22.12.2012	72kg	72kg	151cm.

31.	93039	Muthu	57/M	17.11.2012	22.12.2012	63kg	60kg	168cm.
32.	46737	Kannapan	38/M	21.06.2012	01.08.2012	61kg	61kg	166cm.
33.	51309	Vanniyam	50/M	07.07.2012	29.07.2012	77kg	80kg	172cm.
34.	53961	Vanniya Raj	52/M	17.07.2012	15.08.2012	58kg	59kg	157cm.
35.	2589	Selvi	40/F	07.08.2012	23.08.2012	63kg	65kg	150cm.
36.	2685	Pappa	57/F	14.08.2012	03.08.2012	54kg	56kg	156cm.
37.	65442	Varadha Rajan	80/M	2.08.2012	24.08.2012	63kg	63kg	163cm.
38.	2868	Maya Kannan	38/M	03.09.2012	11.10.2012	67kg	60kg	160cm.
39.	3547	Iyappan	40/M	12.10.2012	5.11.2012	59kg	57kg	168cm.
40.	3783	Samy	48/M	06.11.2012	23.11.2012	Kg	Kg	cm.

Name :MURUGAN	**Age/Sex : 46 /M**	**O.P.No. : 45266**	**From :19.6.12**	**To :29.7.12**	**No.of Days treated : 40 days**
Drug : Kandhaga Parpam – 100mg bd with luke warmwater					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 62 kg**		**After treatment**	**Wt. 62 kg**	
	B.P. : 120/80 mmhg			**B.P. : 120/80 mmhg**		
Pain all over the body,tiredness, excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 102 mgs% Post prandial - 192 mg% Serum cholesterol - 227 mgs% Blood Urea - - 29mgs% Hb A_1 C – 6.7	TC - 7900 ells/cumm DC - P - 63 L - 38 E – 4 ESR ½ hr - 3 mm 1 hr - 7 mm Hb – 12.9	**Urine :** Alb - Nil Sug - F - Nil PP -+ Dep –NAD	**Blood :** Blood sugar Fasting - 102 mgs% Post prandial - 185 mg% Serum cholesterol - 202 mgs% Blood Urea - -32 mgs% Hb A_1C - 6.3	TC - 7500 ells/cumm61 DC - P - 39 L -28 E – 2 ESR ½ hr -4 mm 1 hr - 8 mm Hb –13.6	**Urine :** Alb - Nil Sug - F - Nil PP -Nil Dep - NAD
					Response :Good	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :MAYANDI	**Age/Sex :66 /M**	**O.P.No. : 45944**	**From :20.6.12**	**To :31.7.12**	**No.of Days treated : 40 days**
Drug : Kandhaga parpam – 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**									
	Before treatment			**Wt. 61 kg**		**After treatment**			**Wt. 62 kg**	
	B.P. : 140/90 mmhg					**B.P. : 140/90 mmhg**				
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 127 mgs% Post prandial - 182 mg% Serum cholesterol – 210 mgs% Blood Urea - - 37mgs% Hb A_1 C -7.4	TC – 7600 ells/cumm DC - P - 54 L -28 E – 7 ESR ½ hr -11 mm 1 hr - 22 mm Hb – 9.6	**Urine :** Alb - NIL Sug - F - + PP -++ Dep – 1-2 pus cells	**Blood :** Blood sugar Fasting -110 mgs% Post prandial - 165 mg% Serum cholesterol - 202 mgs% Blood Urea - 37- mgs% Hb A_1C 7.4	TC - 7700 ells/cumm DC - P - 52 L -29 E – 3 ESR ½ hr -5 mm 1 hr - 10 mm Hb – 10.3	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep -NAD				
					Response :Fair					

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :JAMAI NISHA	**Age/Sex : 0 50 / F**	**O.P.No. : 46480**	**From :21.6.12**	**To :31.7.12**	**No.of Days treated : 40 days**

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of

Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination

INVESTIGATION

Before treatment	**Wt. 53 kg**	**After treatment**	**Wt. 52 kg**
B.P. : 130/90 mmhg		**B.P. : 130/90 mmhg**	

Blood :	TC –7200 ells/cumm	**Urine :**	**Blood :**	TC - 7600 ells/cumm	**Urine :**
Blood sugar Fasting - 121 mgs% Post prandial - 220 mg% Serum cholesterol - 195 mgs% Blood Urea - - 31 mgs% Hb A_1 C – 7.4	DC - P – 52 L - 37 E – 3 ESR ½ hr -8 mm 1 hr - 16 mm Hb – 12.8	Alb - NIL Sug - F - NIL PP -+ Dep – NAD	Blood sugar Fasting - 132 mgs% Post prandial - 202 mg% Serum cholesterol - 195 mgs% Blood Urea - - 31 mgs% Hb A_1C - 7.2	DC - P - 54 L -38 E – 4 ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 13.9	Alb - NIL Sug - F - NIL PP -NIL Dep - NAD
				Response :Good	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :MARIAMMAL	Age/Sex : 46 /F	O.P.No. : 46480	From :21.6.12	To :31.7.12	No.of Days treated : 40 days

Drug : Kandhaga parpam – 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of

Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination

INVESTIGATION

Before treatment	**Wt. 49 kg**	**After treatment**	**Wt. 49 kg**
B.P. : 120/70 mmhg		**B.P. : 120/70 mmhg**	

Blood :	TC –6700 ells/cumm	**Urine :**	**Blood :**	TC - 7600 ells/cumm	**Urine :**
Blood sugar	DC - P – 58	Alb - NIL	Blood sugar	DC - P - 5 9	Alb - NIL
Fasting - 143 mgs%	L - 38	Sug - NIL	Fasting - 143 mgs%	L - 35	Sug - F - NIL
Post prandial - 189 mg%	E – 3	PP - ++	Post prandial - 182mg%	E – 6	PP -NIL
Serum cholesterol - 198mgs%	ESR ½ hr - 4 mm	Dep – NAD	Serum cholesterol - 198 mgs%	ESR ½ hr - 5 mm	Dep - NAD
Blood Urea - -32mgs%	1 hr - 8 mm		Blood Urea - -32 mgs%	1 hr - 10 mm	
Hb A_1 C – 8.2	Hb – 13.6		Hb A_1C 7.6	Hb – 13.8	
				Response :Good	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :GANAPATHY	Age/Sex : 58 /M	O.P.No. : 54428	From : 18.7.12	To :26.8.12	No.of Days treated : 40 days

Drug **Kandhaga parpam100mg bd with luke warm water** **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 58 kg**		**After treatment**	**Wt. 58 kg**	
	B.P. : 130\80 mmhg			**B.P. : 130\80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 162 mgs% Post prandial - 192 mg% Serum cholesterol - 185mgs% Blood Urea - -21 mgs% Hb A_1 C – 7.8	TC – 8500 ells/cumm DC - P – 61 L - 38 E – 3 ESR ½ hr 4-mm 1 hr - 8 mm Hb – 12.8	**Urine :** NIL Sug - F - + PP - ++ Dep – 1 pus cells	**Blood :** Blood sugar Fasting - 121 mgs% Post prandial - 146mg% Serum cholesterol -186 mgs% Blood Urea - - 22 mgs% Hb A_1C 7.6	TC - 8600 ells/cumm DC - P - 57 L - 32 E – 4 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 13.2 Response :Fair	**Urine :** NIL Sug - F - NIL PP -+ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :MADASAMY	Age/Sex : 70 /M	O.P.No. : 55285	From : 21.7.12	To : 29.8.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg ,bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt.51 kg**		**After treatment**	**Wt. 51 kg**	
	B.P. : 140/80 mmhg			**B.P. : 140/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 150 mgs% Post prandial - 240 mg% Serum cholesterol - 220 mgs% Blood Urea - 22 mgs% Hb A_1 C – 7.6	TC –8300 ells/cumm DC - P – 53 L - 36 E – 4 ESR ½ hr - 6 mm 1 hr -12 mm Hb – 12.1	**Urine :** Alb -NIL Sug - F - NIL PP -NIL Dep – 1-2 pus cells	**Blood :** Blood sugar Fasting - 153 mgs% Post prandial -182 mg% Serum cholesterol -186 mgs% Blood Urea - -20 mgs% Hb A_1C	TC - 8400 ells/cumm DC - P - 57 L -32 E –2 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 12.8 Response :GOOD	**Urine :** NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :BHAGAVATHY	Age/Sex : 53 /F	O.P.No. : 62065	From :13.8.12	To :10.9.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg,bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 58 kg**		**After treatment**	**Wt. 58 kg**	
	B.P. : 130/70 mmhg			**B.P. : 130/70 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 150 mgs% Post prandial - 227 mg% Serum cholesterol - 220mgs% Blood Urea - 40mgs% Hb A_1 C – 7.6	TC –7200 ells/cumm DC - P – 57 L - 31 E – 7 ESR ½ hr -3 mm 1 hr - 6 mm Hb – 13.2	**Urine :** NIL Sug - F - NIL PP -+ Dep – NAD	**Blood :** Blood sugar Fasting - 189 mgs% Post prandial -201 mg% Serum cholesterol - 200mgs% Blood Urea - 24- mgs% Hb A_1C - 7.0	TC - 7600 ells/cumm DC - P - 5 8 L -32 E – 6 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 13.4 Response :Good	**Urine :** NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :KANDASAMY	Age/Sex : 57 /M	O.P.No. : 62650	From :15.8.12	To :12.9.12	No.of Days treated : 40 days

Drug : Kandhaga parpam 100mg, bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 58 kg**		**After treatment**	**Wt. 58 kg**	
	B.P. : 130/80 mmhg			**B.P. : 130/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 220 mgs% Post prandial - 311 mg% Serum cholesterol - 210 mgs% Blood Urea -26 mgs% Hb A_1 C – 8.6	TC –6600 ells/cumm DC - P – 52 L - 34 E – 2 ESR ½ hr - 3 mm 1 hr - 8 mm Hb – 13.3	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep –1-2 pus cells	**Blood :** Blood sugar Fasting - 187 mgs% Post prandial - 280mg% Serum cholesterol -190 mgs% Blood Urea - 26 mgs% Hb A_1C - 8.4	TC - 6800 ells/cumm DC - P - 57 L -35 E – 4 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 13.2 Response :Good	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :KAMALAM	Age/Sex : 45 /F	O.P.No. : 62941	16.8.12	To :22.9.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 59 kg**		**After treatment**	**Wt. 59 kg**	
	B.P. : 130/70 mmhg			**B.P. : 130/70 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 230 mgs% Post prandial - 310 mg% Serum cholesterol - 190 mgs% Blood Urea - 30 mgs% Hb A_1 C – 9.2	TC –7300 ells/cumm DC - P – 61 L - 38 E – 6 ESR ½ hr - 16 mm 1 hr - 32 mm Hb – 10.5	**Urine :** Alb - NIL Sug - F - + PP - ++ Dep – 1 - 2 pus cells	**Blood :** Blood sugar Fasting - 145 mgs% Post prandial - 202 mg% Serum cholesterol - 190mgs% Blood Urea - - 30mgs% Hb A_1C 8.6	TC - 8200 ells/cumm DC - P - 58 L -35 E – 4 ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD
					Response :Good	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name : RAJAM	Age/Sex : 52 /F	O.P.No. : 64534	From :22.8.12	To :26.9.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg,bd with luke warm water **Diagnosis : Madhumegam**

Complaints of

Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination

INVESTIGATION

Before treatment	**Wt. 65 kg**	**After treatment**	**Wt. 65 kg**
B.P. : 120/90 mmhg		**B.P. : 120/90 mmhg**	

Blood :	TC –8600 ells/cumm	**Urine :**	**Blood :**	TC - 8200 ells/cumm	**Urine :**
Blood sugar	DC - P – 57	Alb - NIL	Blood sugar	DC - P - 61	Alb - NIL
Fasting - 160 mgs%	L - 34	Sug -	Fasting - 160 mgs%	L -37	Sug -
Post prandial - 209 mg%	E –3	F - NIL	Post prandial -220 mg%	E – 3	F - NIL
Serum cholesterol - 190 mgs%	ESR ½ hr -2 mm	PP -+	Serum cholesterol -190 mgs%	ESR ½ hr - 2 mm	PP -NIL
Blood Urea - -24 mgs%	1 hr -4 mm	Dep – NAD	Blood Urea - - 24mgs%	1 hr - 4 mm	Dep - NAD
Hb A_1 C – 7.5	Hb – 13.5		Hb A_1C	Hb – 13.1	
				Response :Fair	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :SELVI	Age/Sex : 56 /F	O.P.No. : 67211	From :31.8.12	To :5.10.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg , bd with luke warm water **Diagnosis : Madhumegam**

Complaints of

Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination

INVESTIGATION

Before treatment	**Wt. 6 5 kg**	**After treatment**	**Wt. 65 kg**
B.P. : 120/80 mmhg		**B.P. : 120/80 mmhg**	

Blood :	TC –8600 ells/cumm	**Urine :**	**Blood :**	TC - 8200 ells/cumm	**Urine :**
Blood sugar	DC - P – 57	Alb - NIL	Blood sugar	DC - P - 58	Alb - NIL
Fasting - 160 mgs%	L - 34	Sug -	Fasting - 110 mgs%	L -35	Sug -
Post prandial - 209 mg%	E – 3	F - NIL	Post prandial -150 mg%	E – 4	F - NIL
Serum cholesterol - 190 mgs%	ESR ½ hr - 2 mm	PP -NIL	Serum cholesterol - 190mgs%	ESR ½ hr - 4 mm	PP -NIL
Blood Urea - 24 mgs%	1 hr - 4 mm	Dep – NAD	Blood Urea --20 mgs%	1 hr - 8 mm	Dep - NAD
Hb A_1 C – 7.5	Hb – 13.5		Hb A_1C - 7.5	Hb – 13.6	
				Response :Good	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :ULAGAMMAL	Age/Sex : 52 /F	O.P.No. : 67290	From :31.8.12	To :5.10.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg ,bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 52 kg**		**After treatment**	**Wt. 52 kg**	
	B.P. : 130/80 mmhg			**B.P. : 130/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 200 mgs% Post prandial - 308 mg% Serum cholesterol - 170 mgs% Blood Urea - -30 mgs% Hb A_1 C –	TC –7500 ells/cumm DC - P – 63 L - 35 E – 7 ESR ½ hr - 7 mm 1 hr - 14 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - + PP -++ Dep – NAD	**Blood :** Blood sugar Fasting - 109 mgs% Post prandial - 182mg% Serum cholesterol -185 mgs% Blood Urea - - 22mgs% Hb A_1C	TC - 7600 ells/cumm DC - P - 57 L -38 E – 6 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 14.2	**Urine :** Alb - NIL Sug - F - NIL PP –+ Dep - NAD
					Response :Fair	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :LAKSHMI	Age/Sex : 48 /F	O.P.No. : 68950	From :5.9.12	To :10.10.12	No.of Days treated : 40 days
Drug :kandhaga parpam 100mg ,bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 61 kg**		**After treatment**	**Wt. 61 kg**	
	B.P. : 120/80 mmhg			**B.P. : 120/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 200 mgs% Post prandial - 344 mg% Serum cholesterol - 207mgs% Blood Urea - 18 mgs% Hb A_1 C – 10.1	TC –6900 ells/cumm DC - P – 61 L - 37 E – 5 ESR ½ hr - 5 mm 1 hr - 10 mm Hb – 12.9	**Urine :** Alb - NIL Sug - F - + PP -+ Dep – NAD	**Blood :** Blood sugar Fasting - 160 mgs% Post prandial -210 mg% Serum cholesterol -196 mgs% Blood Urea - -20 mgs% Hb A_1C 9.3	TC - 7500 ells/cumm DC - P - 61 L -38 E – 4 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 13.1 Response :Fair	**Urine :** Alb - NIL Sug -NIL F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name : CHANDRA	Age/Sex : 60 /F	O.P.No. : 70559	From :10.09.12	To :15.10.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg,bd with luke warm water					Diagnosis : Madhumegam

Complaints of	INVESTIGATION					
	Before treatment	Wt. 60 kg		After treatment	Wt. 60 kg	
	B.P. : 130/80 mmhg			B.P. : 130/80 mmhg		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 180 mgs% Post prandial - 270 mg% Serum cholesterol - 180 mgs% Blood Urea - -26 mgs% Hb A_1 C – 8.7	TC – 7800 ells/cumm DC - P – 59 L - 36 E – 3 ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - + PP -+ Dep – Few cpi cells	**Blood :** Blood sugar Fasting - 150 mgs% Post prandial - 220mg% Serum cholesterol - 177mgs% Blood Urea - -25 mgs% Hb A_1C 8.7	TC - 7900 ells/cumm DC - P - 61 L -38 E – 5 ESR ½ hr - 5 mm 1 hr - 10 mm Hb – 13.8 Response :poor	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep - NAD

No. of weeks after Urine sugar - PP	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th

Name :PERUMAL	Age/Sex : 80 /M	O.P.No. : 70560	From :10.09.2012	To :1.10.2012	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg ,bd ,with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 62 kg**		**After treatment**	**Wt. 62 kg**	
	B.P. : 150/90 mmhg			**B.P. : 150/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 180 mgs% Post prandial - 254 mg% Serum cholesterol - 218 mgs% Blood Urea - -18 mgs% Hb A_1 C –	TC –7500 ells/cumm DC - P – 55 L - 35 E – 5 ESR ½ hr - 5 mm 1 hr - 10 mm Hb – 11.9	**Urine :** Alb - NIL Sug - F - + PP -++ Dep –2 - 3 cpi cells	**Blood :** Blood sugar Fasting - 135 mgs% Post prandial -180 mg% Serum cholesterol 208 mgs% Blood Urea - -23 mgs% Hb A_1C	TC - 7600 ells/cumm DC - P - 56 L -36 E – 3 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 11.3 Response :Good	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :VASANTHA	Age/Sex : 57 /F	O.P.No. : 71001	From :11.09.12	To :16.10.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of

Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination

INVESTIGATION

Before treatment	**Wt. 51 kg**	**After treatment**	**Wt. 51 kg**
B.P. : 120/80 mmhg		**B.P. : 120/80 mmhg**	

Blood :	TC –7300 ells/cumm	**Urine :**	**Blood :**	TC - 7600 ells/cumm	**Urine :**
Blood sugar	DC - P – 58	Alb - NIL	Blood sugar	DC - P - 59	Alb - NIL
Fasting - 170 mgs%	L - 38	Sug -	Fasting - 160 mgs%	L -32	Sug -
Post prandial - 220 mg%	E – 2	F - +	Post prandial -190 mg%	E – 3	F - NIL
Serum cholesterol - 190 mgs%	ESR ½ hr - 4 mm	PP -++	Serum cholesterol -190 mgs%	ESR ½ hr - 2 mm	PP -NIL
Blood Urea - 18 mgs%	1 hr - 8 mm	Dep – NAD	Blood Urea - -21 mgs%	1 hr - 4 mm	Dep - NAD
Hb A_1 C –	Hb – 12.3		Hb A_1C	Hb – 12.7	
				Response :	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :UCHUMAGALI	Age/Sex : 53 /F	O.P.No. : 75635	From :25.09.12	To :22.10.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg,bd withluke warm water **Diagnosis : Madhumegam**

Complaints of	INVESTIGATION					
	Before treatment	**Wt. 67 kg**		**After treatment**	**Wt. 67 kg**	
	B.P. : 130/90 mmhg			**B.P. : 130/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 254 mgs% Post prandial - 352 mg% Serum cholesterol - 195 mgs% Blood Urea - -20 mgs% Hb A_1 C – 10.2	TC – 6900 ells/cumm DC - P – 61 L - 39 E – 6 ESR ½ hr - 11 mm 1 hr - 22 mm Hb –12.7	**Urine :** Alb - NIL Sug - F - ++ PP -+++ Dep –2-3 epi cells	**Blood :** Blood sugar Fasting - 142 mgs% Post prandial -207 mg% Serum cholesterol -187 mgs% Blood Urea - -21 mgs% Hb A_1C 9.5	TC - 7300 ells/cumm DC - P - 61 L -38 E – 2 ESR ½ hr - 7 mm 1 hr - 14 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD
					Response :fair	

No. of weeks after Urine sugar - PP	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th

Name :PALANI MURUGAN	Age/Sex : 50 /M	O.P.No. : 77595	From :01.10.12	To :05.11.12	No.of Days treated : 40 days

Drug :kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 63 kg**		**After treatment**	**Wt. 63 kg**	
	B.P. : 130/80 mmhg			**B.P. : 130/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 200 mgs% Post prandial - 317 mg% Serum cholesterol - 210 mgs% Blood Urea - -21 mgs% Hb A_1 C –	TC –7400 ells/cumm DC - P – 57 L - 38 E – 3 ESR ½ hr - 7 mm 1 hr - 14 mm Hb – 11.6	**Urine :** Alb - NIL Sug - F - + PP -++ Dep – NAD	**Blood :** Blood sugar Fasting - 152 mgs% Post prandial -189 mg% Serum cholesterol 200 mgs% Blood Urea - -21 mgs% Hb A_1C	TC - 7400 ells/cumm DC - P - 57 L -42 E – 6 ESR ½ hr - 3 mm 1 hr - 7 mm Hb – 11.8 Response :Good	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :SUNDARA PANDIAN	Age/Sex : 62 /M	O.P.No. : 78397	From :03.10.12	To :05.11.12	No.of Days treated : 40 days

Drug :kandhaga parpam 100mg,bd with luke warm water **Diagnosis : Madhumegam**

Complaints of

Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination

INVESTIGATION

Before treatment	**Wt. 57 kg**	**After treatment**	**Wt. 57 kg**
B.P. : 130/80 mmhg		**B.P. : 130/80 mmhg**	

Blood :	TC –7500 ells/cumm	**Urine :**	**Blood :**	TC - 7600 ells/cumm	**Urine :**
Blood sugar	DC - P – 65	Alb - NIL	Blood sugar	DC - P - 63	Alb - NIL
Fasting - 180 mgs%	L - 28	Sug -	Fasting - 160 mgs%	L -38	Sug -
Post prandial - 240 mg%	E – 6	F - +	Post prandial -200 mg%	E – 2	F - +
Serum cholesterol - 180 mgs%	ESR ½ hr - 6 mm	PP -++	Serum cholesterol -190 mgs%	ESR ½ hr - 3 mm	PP -+
Blood Urea - -28 mgs%	1 hr - 12 mm	Dep – NAD	Blood Urea - -30 mgs%	1 hr - 6 mm	Dep - few epi cells
Hb A_1 C –	Hb – 13.4		Hb A_1C	Hb – 13.4	
				Response :fair	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :SAMIKANNU	Age/Sex : 53 /M	O.P.No. : 78396	From :03.10.12	To :07.11.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 61 kg**		**After treatment**	**Wt. 61 kg**	
	B.P. : 140/80 mmhg			**B.P. : 140/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 170 mgs% Post prandial - 210 mg% Serum cholesterol - 210 mgs% Blood Urea - - 20mgs% Hb A_1 C –	TC –7900 ells/cumm DC - P – 63 L - 35 E – 3 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep – NAD	**Blood :** Blood sugar Fasting - 150 mgs% Post prandial -180 mg% Serum cholesterol -200 mgs% Blood Urea - -22 mgs% Hb A_1C	TC - 7900 ells/cumm DC - P - 69 L -36 E – 3 ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 13.8 Response :fair	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :GOPAL	Age/Sex : 52 /M	O.P.No. : 82786	From :17.10.12	To :21.11.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 65 kg**		**After treatment**	**Wt. 65 kg**	
	B.P. : 120/90 mmhg			**B.P. : 120/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 200 mgs% Post prandial - 310 mg% Serum cholesterol - 170 mgs% Blood Urea - - 24mgs% Hb A_1 C –	TC –9100 ells/cumm DC - P – 63 L - 34 E – 4 ESR ½ hr - 1 mm 1 hr - 8 mm Hb – 12.9	**Urine :** Alb - NIL Sug - F - ++ PP -+++ Dep – NAD	**Blood :** Blood sugar Fasting - 180 mgs% Post prandial - 280mg% Serum cholesterol -170 mgs% Blood Urea - -26 mgs% Hb A_1C	TC - 8700 ells/cumm DC - P - 61 L -32 E – 2 ESR ½ hr - 2 mm 1 hr - 8 mm Hb – 13.2	**Urine :** Alb - NIL Sug - F - + PP -++ Dep - NAD
					Response :fair	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :RAJALAKSHMI	Age/Sex : 53 /F	O.P.No. : 82787	From :17.10.12	To :21.11.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 54 kg**		**After treatment**	**Wt. 54 kg**	
	B.P. : 130/80 mmhg			**B.P. : 130/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 240 mgs% Post prandial - 290 mg% Serum cholesterol - 180 mgs% Blood Urea - -30 mgs% Hb A_1 C –	TC –8300 ells/cumm DC - P – 59 L - 37 E – 5 ESR ½ hr - 2 mm 1 hr - 6 mm Hb – 13.3	**Urine :** Alb - NIL Sug - F - ++ PP -+++ Dep – NAD	**Blood :** Blood sugar Fasting - 140 mgs% Post prandial -180 mg% Serum cholesterol -180 mgs% Blood Urea - -26 mgs% Hb A_1C	TC - 8300 ells/cumm DC - P - 59 L -37 E – 3 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 13.4 Response :Good	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :RAJAGOPALAN	Age/Sex : 55 /M	O.P.No. : 84850	From :24.10.12	To :28.11.12	No.of Days treated : 40 days
Drug :kandhaga parpam 100mg bd with luke warm water					Diagnosis : Madhumegam

Complaints of	INVESTIGATION					
	Before treatment	Wt. 61 kg		After treatment	Wt. 61 kg	
	B.P. : 130/80 mmhg			B.P. : 130/80 mmhg		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 135 mgs% Post prandial - 270 mg% Serum cholesterol - 220 mgs% Blood Urea - -23 mgs% Hb A_1 C –	TC –7800 ells/cumm DC - P – 48 L - 42 E – 4 ESR ½ hr - 16 mm 1 hr - 26 mm Hb – 10.3	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep – NAD	**Blood :** Blood sugar Fasting - 91 mgs% Post prandial -140 mg% Serum cholesterol -190 mgs% Blood Urea - -26 mgs% Hb A_1C	TC - 7800 ells/cumm DC - P - 51 L -37 E – 2 ESR ½ hr - 8 mm 1 hr - 16 mm Hb – 10.8 Response :Good	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - 3-4 puss cells

No. of weeks after Urine sugar - PP	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th

Name :PARTHIBAN	Age/Sex : 8 /M	O.P.No. : 87774	From :03.11.12	To :08.12.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 73 kg**		**After treatment**	**Wt. 72 kg**	
	B.P. : 130/80 mmhg			**B.P. : 130/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 180 mgs% Post prandial - 240 mg% Serum cholesterol 260 mgs% Blood Urea - -24 mgs% Hb A_1 C – 7.6	TC –8300 ells/cumm DC - P – 56 L - 37 E – 2 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 13.1	**Urine :** Alb - NIL Sug - F - + PP -++ Dep – few puss cells	**Blood :** Blood sugar Fasting - 120 mgs% Post prandial -160 mg% Serum cholesterol -265 mgs% Blood Urea - -24 mgs% Hb A_1C 7.5	TC - 8300 ells/cumm DC - P - 56 L -35 E – 3 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 13.3 Response :Good	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :RANI	**Age/Sex : 48 /F**	**O.P.No. : 87777**	**From :03.11.12**	**To :08.12.12**	**No.of Days treated : 40 days**
Drug : kandhaga parpam 100 mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 69 kg**		**After treatment**	**Wt. 67 kg**	
	B.P. : 120/80 mmhg			**B.P. : 120/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 140 mgs% Post prandial - 190 mg% Serum cholesterol - 200 mgs% Blood Urea - - 38mgs% Hb A_1 C – 7.3	TC –7500 ells/cumm DC - P – 57 L - 33 E – 4 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 10.7	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep – few epi cells	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial -140 mg% Serum cholesterol -190 mgs% Blood Urea - -40 mgs% Hb A_1C 7.0	TC - 7800 ells/cumm DC - P - 57 L -33 E – 4 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 10.9 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :RAJARAMAN	**Age/Sex : 53 /M**	**O.P.No. : 89513**	**From :07.11.12**	**To :12.12.12**	**No.of Days treated : 40 days**
Drug : kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 67 kg**		**After treatment**	**Wt. 67 kg**	
	B.P. : 120/90 mmhg			**B.P. : 120/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 190 mgs% Post prandial - 272 mg% Serum cholesterol - 255 mgs% Blood Urea - - 22 mgs% Hb A_1 C – 8.2	TC –6800 ells/cumm DC - P – 58 L - 36 E – 5 ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 11.8	**Urine :** Alb - NIL Sug - F - + PP -+++ Dep – NAD	**Blood :** Blood sugar Fasting - 170 mgs% Post prandial -210 mg% Serum cholesterol -230 mgs% Blood Urea - - 20 mgs% Hb A_1C 8.2	TC - 7700 ells/cumm DC - P - 59 L -37 E – 2 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 12.6 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :GANGA	Age/Sex : 63 /F	O.P.No. : 89849	From :08.11.12	To :19.12.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 55 kg**		**After treatment**	**Wt. 55 kg**	
	B.P. : 140/80 mmhg			**B.P. : 140/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 290 mgs% Post prandial - 380 mg% Serum cholesterol - 205 mgs% Blood Urea - -28 mgs% Hb A_1 C – 8.9	TC –7300 ells/cumm DC - P – 61 L - 35 E – 6 ESR ½ hr - 12 mm 1 hr - 24 mm Hb – 10.6	**Urine :** Alb - NIL Sug - F - ++ PP - ++++ Dep – NAD	**Blood :** Blood sugar Fasting - 160 mgs% Post prandial -210 mg% Serum cholesterol -205 mgs% Blood Urea - -26 mgs% Hb A_1C 8.5	TC - 7800 ells/cumm DC - P - 61 L -32 E – 2 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 12.0	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep - NAD
					Response :Fair	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :KAPILAN	Age/Sex : 57 /M	O.P.No. : 90517	From :09.11.12	To :14.12.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100 mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 67 kg**		**After treatment**	**Wt. 67 kg**	
	B.P. : 130/90 mmhg			**B.P. : 130/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 147 mgs% Post prandial - 228 mg% Serum cholesterol - 190 mgs% Blood Urea - -26 mgs% Hb A_1 C –	TC –7900 ells/cumm DC - P – 60 L - 38 E – 3 ESR ½ hr - 10 mm 1 hr - 20 mm Hb – 13.2	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep – NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial -150 mg% Serum cholesterol -190 mgs% Blood Urea - -24 mgs% Hb A_1C	TC - 7900 ells/cumm DC - P - 60 L -38 E – 3 ESR ½ hr - 5 mm 1 hr - 10 mm Hb – 13.4 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name : ANNAKKILLI	Age/Sex : 60 /F	O.P.No. : 90556	From :09.11.12	To :14.12.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 64 kg**		**After treatment**	**Wt. 64 kg**	
	B.P. : 130/90 mmhg			**B.P. : 130/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 171 mgs% Post prandial - 281 mg% Serum cholesterol - 190 mgs% Blood Urea - - 24mgs% Hb A_1 C –	TC –8200 ells/cumm DC - P – 58 L - 37 E – 3 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 12.8	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep – NAD	**Blood :** Blood sugar Fasting - 140 mgs% Post prandial -180 mg% Serum cholesterol -190 mgs% Blood Urea - -26 mgs% Hb A_1C	TC - 8200 ells/cumm DC - P - 57 L -32 E – 3 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 13.2 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - few puss cells

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :PIRAMU	Age/Sex : 76 /F	O.P.No. : 46326	From :22.06.12	To :17.07.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis;Madhumegam**

Complaints of	INVESTIGATION					
	Before treatment	**Wt. 57 kg**		**After treatment**	**Wt. 57 kg**	
	B.P. : 140/80 mmhg			**B.P. : 140/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 200 mgs% Post prandial - 302 mg% Serum cholesterol - 232mgs% Blood Urea - -21 mgs% Hb A_1 C –	TC – 7800 ells/cumm DC - P – 9 L - 38 E – 2 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 13.8	**Urine :** Alb - NIL Sug - F - ++ PP -++ Dep – NAD	**Blood :** Blood sugar Fasting - 152 mgs% Post prandial - 180 mg% Serum cholesterol -230 mgs% Blood Urea - -24 mgs% Hb A_1C	TC - 8300 ells/cumm DC - P - 62 L -38 E – 1 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 13.8 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD

No. of weeks after Urine sugar - PP	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th

Name :BAGIYAM	Age/Sex : 50 /F	O.P.No. : 57686	From :13.07.12	To :18.08.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 57 kg**		**After treatment**	**Wt. 57 kg**	
	B.P. : 130/80 mmhg			**B.P. : 130/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 171 mgs% Post prandial - 250 mg% Serum cholesterol - 213 mgs% Blood Urea - -28 mgs% Hb A_1 C –	TC –6800 ells/cumm DC - P – 62 L - 35 E – 3 ESR ½ hr - 1 mm 1 hr - 7 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - + PP -++ Dep – NAD	**Blood :** Blood sugar Fasting - 109 mgs% Post prandial - 160mg% Serum cholesterol -205 mgs% Blood Urea - -22 mgs% Hb A_1C	TC - ells/cumm DC - P - L - E – ESR ½ hr - mm 1 hr - mm Hb –	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD
					Response :Fair	

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :PERUMAL	Age/Sex : 42 /M	O.P.No. : 58554	From :02.08.12	To :18.08.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 59 kg**		**After treatment**	**Wt. 59 kg**	
	B.P. : 120/80 mmhg			**B.P. : 120/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 200 mgs% Post prandial - 335 mg% Serum cholesterol - 180 mgs% Blood Urea - -242 mgs% Hb A_1 C –	TC –7300 ells/cumm DC - P – 62 L - 39 E – 2 ESR ½ hr - 3 mm 1 hr - 8 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - ++ PP -+++ Dep – NAD	**Blood :** Blood sugar Fasting - 140 mgs% Post prandial -196 mg% Serum cholesterol -236 mgs% Blood Urea - -21 mgs% Hb A_1C	TC - 7600 ells/cumm DC - P - 62 L - 39 E – 2 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 13.8 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :VALLINAYAGAM	Age/Sex : 70 /F	O.P.No. : 61234	From :10.08.12	To :25.08.12	No.of Days treated : 40 days
Drug :kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**									
	Before treatment		**Wt. 63 kg**		**After treatment**			**Wt. 58 kg**		
	B.P. : 140/90 mmhg				**B.P. : 140/90 mmhg**					
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 140 mgs% Post prandial - 180 mg% Serum cholesterol - 275mgs% Blood Urea - -36 mgs% Hb A_1 C – 7.2		TC –7600 ells/cumm DC - P – 52 L - 38 E – 3 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 13.5	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep – NAD	**Blood :** Blood sugar Fasting - 82 mgs% Post prandial -118 mg% Serum cholesterol -275 mgs% Blood Urea - -24 mgs% Hb A_1C 7.2			TC - 7800 ells/cumm DC - P - 52 L -39 E – 3 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 13.6	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD	
								Response :Good		

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :RAJAN	Age/Sex : 80 /M	O.P.No. : 76781	From :28.09.12	To :13.10.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 52 kg**		**After treatment**	**Wt. 52 kg**	
	B.P. : 140/90 mmhg			**B.P. : 140/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 152 mgs% Post prandial - 189 mg% Serum cholesterol - 252mgs% Blood Urea - - 21mgs% Hb A_1 C – 8.6	TC –7800 ells/cumm DC - P – 60 L - 38 E – 3 ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 12.2	**Urine :** Alb - NIL Sug - F - + PP -++ Dep – few epi cells	**Blood :** Blood sugar Fasting - 102 mgs% Post prandial -120 mg% Serum cholesterol -238 mgs% Blood Urea - -22 mgs% Hb A_1C 8.2	TC - 7800 ells/cumm DC - P - 60 L -35 E – 2 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 12.6 Response :Good	**Urine :** Alb - NIL Sug - F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :SENDUR PANDI	Age/Sex : 64 /M	O.P.No. : 86995	From :1.11.12	To :12.12.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 61 kg**		**After treatment**	**Wt. 61 kg**	
	B.P. : 140/80 mmhg			**B.P. : 140/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 150 mgs% Post prandial - 227 mg% Serum cholesterol - 220mgs% Blood Urea - -40 mgs% Hb A_1 C –8.2	TC – 8200 ells/cumm DC - P – 61 L - 38 E – 2 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 11.6	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep –1-2 epi cells	**Blood :** Blood sugar Fasting - 135 mgs% Post prandial - 211mg% Serum cholesterol -202 mgs% Blood Urea - -40 mgs% Hb A_1C 8.2	TC - 8200 ells/cumm DC - P - 57 L -41 E – 3 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 11.8 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :SUDALI	Age/Sex : 57 /F	O.P.No. : 80484	From :05.11.12	To :16.12.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 3 kg**		**After treatment**	**Wt. 53 kg**	
	B.P. : 130/90 mmhg			**B.P. : 130/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 281 mgs% Post prandial - 350 mg% Serum cholesterol - 290 mgs% Blood Urea - -24 mgs% Hb A_1 C – 9.6	TC –7800 ells/cumm DC - P – 63 L - 42 E – 1 ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 12.8	**Urine :** Alb - NIL Sug - F - + PP -+++ Dep – NAD	**Blood :** Blood sugar Fasting - 189 mgs% Post prandial -201 mg% Serum cholesterol -280 mgs% Blood Urea - -24 mgs% Hb A_1C 9.3	TC - 8200 ells/cumm DC - P - 62 L -40 E – 2 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 13.2 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :PANDIYAN	Age/Sex : 81 /M	O.P.No. : 92202	From :1.11.12	To :18.12.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg bd with luke warm water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 60 kg**		**After treatment**	**Wt. 60 kg**	
	B.P. : 140/90 mmhg			**B.P. : 140/90 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 226 mgs% Post prandial - 329 mg% Serum cholesterol - 252 mgs% Blood Urea - -20 mgs% Hb A_1 C – 10.7	TC –9200 ells/cumm DC - P – 65 L - 33 E – 2 ESR ½ hr - 12 mm 1 hr - 24 mm Hb – 12.6	**Urine :** Alb - NIL Sug - F - + PP -++ Dep –1-2 puss cells	**Blood :** Blood sugar Fasting - 112 mgs% Post prandial -345 mg% Serum cholesterol - 252mgs% Blood Urea - - mgs% Hb A_1C 10.2	TC - 8500 ells/cumm DC - P - 63 L -42 E – 2 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 10.5 Response :Poor	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :MURUGAN	Age/Sex : 48 /M	O.P.No. : 76862	From :01.11.12	To :12.12.12	No.of Days treated : 40 days

Drug : kandhaga parpam 100mg bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 65 kg**		**After treatment**	**Wt. 65 kg**	
	B.P. : 130/70 mmhg			**B.P. : 130/70 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 160 mgs% Post prandial - 240 mg% Serum cholesterol - 210mgs% Blood Urea - -22 mgs% Hb A_1 C – 8.4	TC –6800 ells/cumm DC - P – 57 L - 38 E – 2 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 12.2	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep – NAD	**Blood :** Blood sugar Fasting - 152 mgs% Post prandial -210 mg% Serum cholesterol -210 mgs% Blood Urea - -25 mgs% Hb A_1C 8.4	TC - 7200 ells/cumm DC - P - 60 L -42 E – 3 ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 13 Response :Fair	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :LAKSHMAN	Age/Sex : 58 /M	O.P.No. : 68951	From :5.9.12	To :10.10.12	No.of Days treated : 40 days

Drug :kandhaga parpam 100mg ,bd with luke warm water **Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment	**Wt. 61 kg**		**After treatment**	**Wt. 61 kg**	
	B.P. : 120/80 mmhg			**B.P. : 120/80 mmhg**		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 200 mgs% Post prandial - 344 mg% Serum cholesterol - 207mgs% Blood Urea - 18 mgs% Hb A_1 C – 10.1	TC –6900 ells/cumm DC - P – 61 L - 37 E – 5 ESR ½ hr - 5 mm 1 hr - 10 mm Hb – 12.9	**Urine :** Alb - NIL Sug - F - + PP -+ Dep – NAD	**Blood :** Blood sugar Fasting - 160 mgs% Post prandial -210 mg% Serum cholesterol -196 mgs% Blood Urea - -20 mgs% Hb A_1C 9.3	TC - 7500 ells/cumm DC - P - 61 L -38 E – 4 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 13.1 Response :Fair	**Urine :** Alb - NIL Sug -NIL F - NIL PP -NIL Dep - NAD

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**

Name :SUDHAMATHY	Age/Sex : 54 /F	O.P.No. : 86998	From :1.11.12	To :12.12.12	No.of Days treated : 40 days
Drug : kandhaga parpam 100mg bd with luke warm water					Diagnosis : Madhumegam

Complaints of	INVESTIGATION					
	Before treatment	Wt. 61 kg		After treatment	Wt. 61 kg	
	B.P. : 140/80 mmhg			B.P. : 140/80 mmhg		
Pain all over the body,tiredness,excessive thirst,excessive intake of food,excessive urination	**Blood :** Blood sugar Fasting - 150 mgs% Post prandial - 227 mg% Serum cholesterol - 220mgs% Blood Urea - -40 mgs% Hb A_1 C –8.2	TC – 8200 ells/cumm DC - P – 61 L - 38 E – 2 ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 11.6	**Urine :** Alb - NIL Sug - F - NIL PP -++ Dep –1-2 epi cells	**Blood :** Blood sugar Fasting - 135 mgs% Post prandial - 211mg% Serum cholesterol -202 mgs% Blood Urea - -40 mgs% Hb A_1C 8.2	TC - 8200 ells/cumm DC - P - 57 L -41 E – 3 ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 11.8	**Urine :** Alb - NIL Sug - F - NIL PP -+ Dep - NAD
					Response :Fair	

No. of weeks after Urine sugar - PP	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th